

A 78

JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION



UNIVERSITY OF CALIFORNIA

OCT 5 1939

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OCTOBER, 1939

In This Issue—Business Proceedings,
Memphis Meeting

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Published by
AMERICAN VETERINARY MEDICAL ASSOCIATION
221 N. LA SALLE STREET
CHICAGO, ILL., U.S.A.

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Vol. XCV

OCTOBER, 1939

No. 751

Address of President Bergman*

I FEAR that what has been designated and dignified in the official program as a presidential address may appear somewhat unique, if not completely unorthodox, in that it omits historical references, avoids predictions as to the future and makes no special recommendations.

Considering what might be termed a rather complete metamorphosis of our national association within the past two years, there is a temptation to discuss in some detail certain of the transformations and reforms that have taken place, results of which are already manifest by a rapidly increasing membership and expanding service and influence. However, a discussion of these details is impracticable at this time and would infringe upon the various reports and recommendations of the standing and special committees which have been studying both our intrinsic and extrinsic professional problems during the past year or longer.

As far as the incumbent president has had jurisdiction, the members of these committees have been selected with special reference to their qualifications for the work peculiar to a given committee. An

attempt has been made by the president to follow and encourage the activities of the majority of the committees. Their reports should be carefully considered by the House of Representatives and the Executive Board. Any special recommendations made either should be approved or disapproved and, if approved, should be definitely recognized as policies and made effective.

The comments of your president, based upon observations and responsibilities of the past two years, will be of a general nature as regards the contemporary situation of the veterinary profession of North America and its national body, the American Veterinary Medical Association. It is hoped that some of the suggestions may at least serve as subjects for editorial comment during the coming year to focus attention upon them, or possibly for detailed study by the Executive Board or some qualified committee to which they may be referred.

VETERINARY MEDICAL ORGANIZATION IMPERATIVE

If ever there has been a time in the history of veterinary medicine when thorough organization within its own ranks has been vitally important, it is now. With rapidly

*Presented by H. D. Bergman at the 76th annual meeting of the A.V.M.A., Memphis, Tenn., August 28 to September 1, 1939.

changing economic and social programs, the latter involving suggestions of socialized medicine and expansion of so-called state medicine, it behooves our profession to defend its interests or to extend organized cooperation, whichever may be indicated.

Professional organization is the sole protection of every individual veterinarian in this country, regardless of his field of activity. Yet, the record shows that the ratio of those eligible to membership in veterinary medical organizations is much below that of the other learned professions and, furthermore, that we are not generally measuring up to them in the duties of advancing and protecting our own interests. Lack of support of state and regional organizations as well as the national association is evident, yet history definitely indicates that the advance of the veterinary profession has been directly related to the growth and development of its societies. It is only through them that the interests of the profession can be promoted and protected, and proper contact effected with other organizations or with the agencies of the local, state, and federal governments.

The ultimate objective in developing competent organization should be to bring every eligible veterinarian into his state association and, through it, into the national. This is the practice in both human and dental medicine. Some such arrangement is the ideal situation and should be accomplished in veterinary medicine very soon, now that all of the state societies are affiliated with us. It will be a tremendous step toward a complete federation of the wide interests of the profession. Competent national organization is essential to recognition and progress, for no profession can occupy any higher standing in public esteem than that of its national association.

The immediate need of the American Veterinary Medical Association, in order to be able to represent creditably organized veterinary medicine on a national scale and to provide to the profession the service that it needs, is an increase in membership to at least seven or eight thousand. It is the opinion of the speaker that with the leader-

ship of the executive officers and a coordinated effort on the part of all branches of the profession, such an increase can be accomplished in a relatively short time. Experience this year indicates that with the proposed plan of inducing graduates from student chapters into immediate A.V.M.A. membership, together with the country-wide interest in the reorganization program and JOURNAL improvement, the membership can be substantially increased. With a goal of 7,500 members, a definite program for accomplishing this is now being arranged by the executive officers. With this enrollment, our profession will compare favorably with human and dental medicine as regards the percentage of eligible members supporting the national body.

REORGANIZATION

Undoubtedly, the most progressive step taken by the Association since establishing a central secretariat in 1922 is the provision made by the House of Representatives at Omaha in 1937 for a special committee of the Executive Board, consisting of the president, president-elect, and chairman of the Board, to which was assigned certain reorganization responsibility. This committee was given broad executive authority and delegated the task of making a detailed study of the management of our affairs, with the view to correcting deficiencies, expanding service, and perfecting an organization that would more effectively represent the interests of the veterinary profession of North America.

Fundamental to any expanded program of service is the matter of finance. Any expansion that involves an increase of several thousands of dollars a year in expenditures and does not foresee an increase in income within a reasonable time, is not good business. The sources of association income are memberships, annual dues, journal subscriptions, journal advertising and minor sales of emblems, binders, etc. As previously stated, increased membership is vitally important, for with it comes increased income from both advertising and annual dues. The matter of the annual

dues in relation to membership needs careful study. The dues should be proportionate to the services rendered.

As a member for two years of what is now generally termed "the reorganizing committee," I know how faithfully and at what a sacrifice of time and personal interests the members have worked at their assigned task. During this time the committee has also served as a Committee on JOURNAL. Partial departmentalization of the central office has been effected. Ultimately, this should provide for three major departmental positions, *i.e.*, executive secretary, assistant executive secretary, and editor of publications, each with large discretionary authority.

The executive secretary would supervise and coördinate all central office activities, build membership and promote the general objectives of the Association. The assistant executive secretary would understudy the executive secretary with certain definite responsibilities, especially those involving public relations, expanding veterinary service and influence and centralizing and coördinating the work of committees, such as proprietary pharmaceuticals, biological products, public relations, etc. The editor of publications would publish for the profession the official journal and such other veterinary periodicals, pamphlets, booklets and books as may seem desirable and feasible.

Personally, I believe that our association should dominate the field of veterinary journalism in this country through maintaining facilities for the publication of whatever journals or other periodicals the profession will support. At present, the field—considering the number of possible subscribers—is highly competitive, due to the position of private and free commercial journals or house organs. There is little doubt but that the house organs are an obstacle to the wider circulation of the independent subscription journals, including our official journal. Competition among the house organs has forced them to a size, width of distribution, and character that must make them somewhat of a burden upon the commercial firms supplying them.

One can readily believe that there are members of the profession who upon receiving a half dozen or more free commercial journals might tend to lose interest in subscription journals and possibly A.V.M.A. membership. The saturation point, in the matter of periodicals, is rather easily reached in any field and when that point is passed, both the periodicals and the field suffer. It would seem that the entire matter of publications might well be studied to the advantage of all concerned.

In this connection, I should like to call attention to the present JOURNAL, already increased two-thirds in size since first issued in its new format one year ago. It speaks for itself. It is proposed to develop the enlarged and revamped JOURNAL to the end that each issue will be of direct interest to every veterinarian in the country, regardless of his field of activity. A special effort will be made to emphasize the field of clinical medicine for the benefit of the practitioner.

As regards the present personnel of the central office in Chicago, Dr. L. A. Merillat was named executive secretary on January 1, 1939. On July 1, Dr. Eugene B. Ingmand, an exceptionally well trained and qualified young man, five years out of college, assumed the position of assistant executive secretary. Mr. J. J. Shaffer, a young man with college training in journalism, has taken over certain responsibilities in connection with editing the JOURNAL. These men, with the necessary women clerks and stenographers, each with specific duties and responsibilities, comprise the staff of the systematized and modernized central office, which I hope you will take time to visit when in Chicago. A detailed report of the work of the Committee on Reorganization, its accomplishments and future program will be given in the reports of Chairman H. W. Jakeman of the Executive Board and of the reorganizing committee.

Experience of the past two years definitely shows that as a matter of future policy, a similar committee of the three elective officers—president, president-elect and chairman of the Executive Board—should continue to serve each year as a



Left: Congressman Walter A. Chandler delivers the address of welcome at the opening session, Tuesday morning, August 29. Center: H. W. Jakeman presents gold key to Cassius Way. Right, Dr. Jakeman awards the Twelfth International Veterinary Congress prize to John R. Mohler.

special committee of the Board, with wide discretionary authority, to work with the executive secretary in the routine management of Association affairs. This is definitely essential, if the expanded program of the national organization is to be effectively consummated.

EDUCATION

The old adage, "No river can rise higher than its source," can well be applied to the professions, for it may truthfully be said that no profession can rise higher in public standing and respect than its source, *i.e.*, the educational institutions that give birth to its personnel and which, together with its professional organizations, largely establish its creeds.

The veterinary educational situation presents several problems that need careful study. These include: a) adequate financial support in existing colleges; b) correct educational methods and proper facilities to promote the efficiency of teaching; c) the elements of a balanced curriculum in veterinary medicine; d) pre-veterinary re-

quirements; e) number of additional colleges needed and their location; f) question and probable effects of a federal subsidy for existing colleges; g) limitation of enrollments, or whether a substantial increase in the yearly output of graduates should be encouraged. There are honest differences of opinion as regards the latter.

The fundamental purpose of limiting enrollment in the colleges has not been primarily to limit the output of graduates but rather to avoid accepting a greater number of students than the educational facilities of the various colleges can accommodate. These facilities include physical plant, equipment, and teaching staff. It is the opinion of many that the present limitation of enrollment is not as serious a factor in itself as the handicap placed upon young men desiring to study veterinary medicine who live in states not maintaining veterinary colleges. Naturally, applicants who are residents of the states maintaining colleges are given preference in enrollment.

It is not likely that our state institutions will be supplied with funds by their respective legislatures to expand educational facilities in order to accommodate a large number of veterinary applicants not residents of the state. The necessary penalizing of the non-resident student is the serious problem. It would seem that limitation of enrollment in the long run is favorable to the best interests of the profession. It undoubtedly helps maintain a more satisfactory situation than would prevail if there were unlimited opportunities for many to enter veterinary colleges who are not primarily interested in the profession as a career, but rather because they feel that it may offer peculiar or unusual financial advantages.



H. W. Jakeman presents gold key and certificate to H. D. Bergman.

A properly balanced curriculum is also an open question in veterinary education. Problems in both preventive and curative medicine are often more complex than those of human medicine. The veterinarian deals with various species of animals, each with its peculiar diseases and varied reactions to standard methods of disease prevention and treatment. The colleges are often criticized for not giving sufficiently practical courses. With the tremendous advances in the medical sciences, who can foresee what may or may not be practical a few years hence. The answer would seem to be that the veterinary curriculum should lay a solid foundation of the fundamental branches of medical science so that adjustments to changing conditions of practice can readily be made by the practitioner. Proficiency in the art of medicine is important but proficiency in the science of medicine is vitally essential to its rational and successful practice.

The fact, now well established, that veterinary medicine must have a part in public

health activities creates another curricular problem. It is important that students be given as solid a grounding in the fundamentals of this field as a balanced four-year curriculum will permit. But, it should be emphasized that the student or veterinarian who plans to do public health work should make special preparation for that work, just as does the graduate in medicine or sanitary engineering. It should be recognized that veterinarians entering this field must be familiar with public health history, organization, administration and objectives. This can not be acquired in the undergraduate course but must be secured in colleges giving specialized graduate work. That is, the training required of other technically trained individuals prior to entering public health work and the veterinarian should be no exception.

The educational problems of the veterinary profession are definitely matters for joint study by qualified representatives of the Association and the deans and faculties of the colleges. This year, Dean R. R.

HERE AND THERE AT THE MEMPHIS MEETING

Upper left: A view of the registration desk on the opening day of the convention. Upper center: U. S. Army officers attending the event are (standing, left to right) Lt. Col. J. A. McCallam, Col. B. E. Seely, Major S. M. Nevin, Major C. S. Greer and Lt. K. H. Willers; (back row seated, left to right) Col. W. H. Houston, Lt. Col. S. B. Renshaw, Lt. Col. C. M. Cowherd, Lt. Col. F. L. Holycross, Lt. Col. R. T. Seymour and Major J. L. Owens; (front row seated, left to right) Lt. Col. L. C. Ewen, Lt. Col. N. M. Neate, Col. J. E. Behney, Col. J. D. Derrick, Col. R. A. Kelser, and Col. J. R. Underwood. Upper right: R. G. Green, professor of bacteriology at the University of Minnesota, Minneapolis, Minn., presenting a paper before the second general session, convened in the palatial Skyway room of the Peabody Hotel. Lower left: Congressman Walter H. Chandler of Memphis delivering the address of welcome; note how intently the audience was listening. Lower center and right: East and west wings of the scientific exhibits.





The evening of Wednesday, August 30, was devoted to "food, fun and dancing" and the president's reception.

Dykstra, representing the deans, has been cooperating with the Committee on Education in studying the matter of veterinary college enrollments and the much discussed large number of qualified applicants being refused admission. The result of this survey will be included in the report of the Committee on Education at this meeting and will be found most interesting.

RESEARCH

From a humble beginning, veterinary research in North America has developed into the keystone of the profession. Without hesitation, it has accepted the challenges of the ever increasing complex disease problems of animal industry and attempted to keep pace with them. Numerous meritorious achievements have been recorded in its annals, whereby certain phases of animal industry have been able to survive. Most recent are developments in the method of immunization against the virus of equine encephalomyelitis.

With the intensive development in late years of enlarged and complex technics in veterinary research, there have arisen concomitant economic problems. State-supported educational and research institutions are thinking about the possible influence of recent sociological developments involving pensions, grants, and subsidies which require large expenditures of money from tax sources. Will these limit support of other state functions, such as education and research?

Questions are also being raised relative to future policies of both the state and federal governments concerning research in animal diseases. This has been engendered to some extent by the advent of federal regional laboratories for research in various phases of animal production. Will such laboratories discourage appropriations by some states for similar research? They certainly should not. Every state has its peculiar animal-disease problems and must maintain interest in and assume immediate responsibility for them. Again, there are problems of a regional nature that may require experimental procedures necessitating an outlay beyond the possibility of development by a single state. There is great opportunity for cooperation and coordination of efforts.

The fact is evident that the older established approaches to disease research, *i.e.*, bacteriology, cellular pathology and parasitology, are no longer adequate. Biochemic, endocrine, and nutritional relationships must be given careful consideration. This means that existing research units must be strengthened and expanded to keep pace with developments in other scientific fields; otherwise, the more complex problems will drift to other agencies for solution. It appears that certain disease problems now considered solved should be reopened and reexamined by the newer procedures. Larger appropriations are necessary. Veterinary research institutions should benefit more from special grants and endowments



The crowd pictured across these pages attended the convention dinner, held in the Skyway room of the Peabody.

and it would seem that those phases which have a particular public health relationship could readily secure this kind of financial support if the proper approach were made.

The time has come when the national association should interest itself more in the research branch of the profession with the viewpoint of determining the needs and exerting its influence in securing adequate support to insure a continuation of progress. I am pleased to say that this year most cordial relations, which should bring fruitful results, have been established with the National Research Council through our representative to that body.

GENERAL PRACTICE

The practitioner is properly referred to as the backbone of the veterinary profession, for it is estimated that at least 65 per cent of its members in this country are engaged in specialized or general practice. Therefore, in the deliberations of our organization, in the interest of all branches of the profession, the practitioners' interests should be paramount. Generally speaking, from observations made in various sections of the country this year, veterinary practice will compare quite favorably with that of human or dental medicine. Each has its peculiar problems and in no case has a utopia been reached. The two matters most commonly stressed to me in which the coöperation of our national organization is requested are: Improvement in the statutes governing vet-

erinary practice in many of the states, and more utilization of the private practitioner in state service pertaining to disease control and livestock regulatory matters.

Time will not permit of an enlargement on these but merely brief reference is made to their importance. It is not surprising that the legal requirements governing the practice of veterinary medicine are unsatisfactory in most of the states, if it is recalled that these acts were created, in many instances, 30 to 40 years ago, when veterinary practice and the circumstances surrounding it were different from present modes. Then, the branch of animal industry mainly requiring protection from the ministrations of unqualified men was the horse industry and most of the laws were intended primarily to assure the services of men qualified to treat the diseases and injuries of equine animals. Preventive medicine, involving the use of biological products, was little practiced then, but today it has grown to be vitally important in all domesticated animals and is, in most states, largely unregulated. Likewise, the sale of proprietary remedies in the poultry and swine industries was in its infancy, but this, too, has grown to large proportions.

It is obvious that in most of the states the livestock industry is entitled to better protection than is now given in existing veterinary practice acts. That these are not satisfactory is perhaps best indicated by the fact that several are presented for

amendment at every legislative session. Since there has been no clear definition of what is required in these laws to assure protection to the livestock industry and the prerogatives of the veterinary profession, in most cases these laws have not been much improved by amendment.

I am pleased to report that one of the projects this year of the Committee on Public Relations has been to collect and study the veterinary practice acts of all of the states. It is hoped that as a result of this study, a model will be prepared that may serve as a guide in future revisions of existing state laws, whereby the livestock industry may be better protected from quackery and greater encouragement given to the profession trained to protect the nation's greatest industry. This association should assume active leadership and extend coöperation to state officials in the improvement of a situation so vitally related to the economic welfare of the country.

The relationship of the private practitioner to state veterinary service also needs careful study. I should like to refer to the report of the Committee on Public Relations as presented at our meeting in New York last year and published in the April, 1939, issue of the *JOURNAL*. The section of the report entitled "State Veterinary Service" states in part in the first paragraph:

Unquestionably of recent years the trend has been more and more toward state veterinary medicine. As to whether this trend will continue or be reversed in the near future is not predictable. It is likely to be governed by general social changes entirely outside the control or influence of the profession. It would seem the part of wisdom, however, to shape our affairs as best we can to render a good veterinary service whatever happens.

Then follows a discussion as to what the veterinary profession can do in preparation for an advantageous position in case we find ourselves a part of state veterinary medicine.

The program proposed includes the private practitioner as an integral part of state service and cites how satisfactory

such an arrangement has proved in certain states, both to the practitioner and to the state. Utilization of his services in state veterinary medicine would go far toward solving the problem of inadequate service so often complained of in widespread, sparsely settled communities, where dependence upon private practice alone is not feasible. There is every probability that the American Veterinary Medical Association acting with the United States Live Stock Sanitary Association might markedly assist some of the states by advice and counsel, beneficial to all concerned, in improving their programs for animal-disease control.

There is another important consideration. Epizootiology is a complex and not too well understood subject which is often made still more difficult by social and political influences. It would appear only logical that the chief state regulatory officers should possess not only high qualifications but be assured of greater security in tenure of office, in order that more advantage may accrue from experience. Certainly, the state veterinarian and his assistants, under whose supervision the local practitioners work in disease control, should be under state civil service and not subject to political domination.

Regardless of recognized shortcomings, deficiencies and opportunities for improvement which must be cultivated, our profession is in a reasonably satisfactory condition. I have been especially impressed in my travels this year by the large attendance and interest at meetings in all parts of the country. This indicates a relatively prosperous condition within the profession and a desire of its members to profit both by the programs and contacts with their colleagues.

Other significant evidence of satisfaction is the present tendency for young men to follow their fathers in veterinary medicine, as is traditional in human medicine. This is revealed in the records of the institution with which I am associated. Among the list of applicants to enter veterinary medicine at Iowa State College this year, 29

are sons of veterinarians, and during this college year there will be a total of 39 such sons in the entire veterinary student body. This situation did not exist ten or 15 years ago. Again, this points to a reasonably happy situation within the ranks of the profession. May its leaders use wise judgment and keep it thus.

GENERAL COMMENT

This address will allow only brief reference to several other matters of great importance to our association which involve both its internal organization and external relationships. Some progress has been made this year in their correction and improvement but they must continue to have the careful study of both the legislative and executive bodies. They are as follows:

Revision and Codification of the Constitution and By-Laws.—The definitions of our present constitution and by-laws are entirely inadequate and too limiting to allow of the development and expansion of the Association necessary to meet the responsibilities of nationally organized veterinary medicine. The Committee on Reorganization has been handicapped in effecting certain changes due to inability to interpret the legal responsibility and authority of both the legislative and executive bodies, as well as the individual executive officers of the Association. Many changes and much clarification are needed. The constitution and by-laws have been revised during the year in an effort to correct deficiencies. The report on revision in printed form will be presented to the Executive Board and House of Representatives for consideration at this meeting. [*The revised constitution and by-laws will be published in the November, 1939, issue.*]

Executive Board.—Better balanced representation on the Executive Board of the major fields and activities of the profession needs careful study. The incongruity of the haphazard arrangement of states into so-called districts and the method of election of Board members is only too evident to a careful observer. The personnel of the Executive Board, duties of its mem-

bers, manner of their election, responsibilities and authority, including relations with the House of Representatives, are matters which merit serious immediate consideration.

Resident State Secretaries.—Closer relationship between our resident state secretaries and the state association secretaries is definitely important and mutually advantageous. Better contact of these state officers with the Association's central office and the Executive Board member of their particular district is also essential. This year your president asked each member of the Executive Board to communicate with each state association secretary in his district and request him to recommend a qualified resident secretary for his state. The response was excellent and the results in stimulating membership in the national body through their joint activities extremely satisfactory.

Student Chapters.—Here are the sources of new members of the profession and its potential leaders. Active interest is evident in most of these student organizations. It should be cultivated in all of them by active coöperation extended from the central office. Efforts made by the executive officers this year have added hundreds of student subscribers to the JOURNAL at the new \$2.00 student rate. The interest of qualified graduating seniors in immediate induction into membership, without payment of the regular membership fee, was almost 100 per cent in several of the colleges. Relations with the student chapters this year have been advantageous to all concerned.

Section Meetings.—An attempt has been made this year to speed up and make more interesting the technical sessions, especially those of the sections, by requiring abstracts of the leading papers for distribution at the section meetings. This is a popular practice in many large scientific societies. Under this plan, the author will present only a résumé of his work, the complete paper being published later in the JOURNAL.

Certain other procedures recommended by the Section on Research will be intro-

duced in that section at this meeting. Modernizing of our convention programs to promote greater interest and efficiency has too long been neglected. The handling of many phases of the national meeting still needs study. Greater autonomy should be given to the different sections, possibly to the extent that they be permitted to elect their own officers rather than have them appointed by the president. Additional sections for special interests might well be provided, for example, a section on state veterinary medical examining boards. Such a section would be extremely beneficial to members of such boards and, among other questions, they might discuss the desirability of a national board of veterinary medical examiners comparable to those of human and dental medicine. The Executive Board should carefully survey the entire question of the method of conducting our national meetings with the view of making them of greater interest and value.

Women's Auxiliary.—The relationship of this fine organization of women to the A.V.M.A. needs examination, especially as regards financial matters pertaining to student loans, their approval and collection. Questions raised during the past year indicate that the legality of certain acts should be determined for the protection of both groups.

Enlarging Association Influences.—The Committee on Public Relations has emphasized many times in the past the importance of enlarging the influence of the national association and has cited many ways by which this might be accomplished. Some effort has been made this year to follow certain of these suggestions. With the near completion of the work of the reorganizing committee and proposed expansion of activities, definite effort should be made to take advantage of our many opportunities to enlarge the influence of the veterinary profession on a national scale. The reorganization of the central office and its new personnel will permit this and the executive officers should cooperate to the end that it is accomplished.

In conclusion, I wish to express my sin-

cere appreciation of the honor conferred in permitting me to serve as your president. It is a privilege that can be accorded to but a limited number of many deserving and highly qualified members of the profession. I have tried faithfully to meet the responsibilities of this high office in such a way as to merit the confidence placed in me. Any contributions that have been made to professional progress within the year are due to the fine work and wholehearted coöperation extended by all Association officers, committees and members in general. To each of them, I am grateful.

Finally, I wish especially to thank the Committee on Local Arrangements and all others who have striven so hard and made the personal sacrifices necessary to assure the success of our 76th annual convention.

Selecting Section Officers

THE MOVEMENT to make the various sections of the Association self-governing bodies began to take form under presidential direction at the Memphis meeting. Members will recall that formerly section officers were elected from the floor of the section meeting at each annual session.

Experience with this plan of selecting the officers showed in several instances that it was prejudicial to the best results. These hastily chosen chairmen and secretaries were not always able or willing to assume the responsibilities of their offices and, as a consequence, the section work of given years fell below the desired standard. To correct this fault, the basic laws of the Association were amended so as to make these officers annual presidential appointments.

Various sections have recently raised objections to the amendment on the logical ground that the members of the sections are better qualified to select their officers than a president, who might not choose them wisely. Being sound and reasonable, the objections were studied and a plan was instituted. The plan consists of the making of nominations for these officers by the members of the section at one of their stated meetings. From these nominees the president is to make his appointments.

The Memphis Session

THE 76TH annual meeting of the Association, held at Memphis, Tenn., August 28 to September 1, was successful from every count by which such events are scored. From several points of view, it was more than just one more annual milestone in the history of the veterinary profession of North America. There was a full measure of the hospitality for which southerners are famous. There was an atmosphere of cheerfulness and gaiety, and a tenor of good humor that seldom prevailed in recent years.

But, what stood out to the credit of the Association more than the emotional factors was the magnetic program. The literary contributions, the educational displays, the commercial exhibits, the character of the clinic, and the unique entertainment for the ladies made up an assemblage that will long be remembered.

An inspiring address of welcome by Congressman Chandler, the stirring response of N. S. Mayo, the witty speech of Mrs. C. H. Case of the Women's Auxiliary, and the never-to-be-forgotten presidential address of H. D. Bergman were the petards of the opening session. The presentation of the president's key and scroll to H. D. Bergman and the Twelfth International Veterinary Congress prize to John R. Mohler by H. W. Jakeman, chairman of the Executive Board; the presentation of the president's key to President-Elect Cassius Way by President Bergman; and the opening invocation and classical music before a crowded house seated in the palatial Skyway room of the Peabody Hotel, all combined to make the opening session an hour of splendor and good cheer that never died down throughout the meeting.

The attendance was 1,366, without the usual hanger-ons who escape the watchful eye of the registration desk. Chairman Gilmann of the local Committee on Arrangements estimated the number of those who did not register as being between 250 and 500. Our guess is 150. There was no way to count these. It is, however, not

amiss to set the attendance at 1,400, or, the second largest convention the Association has held. The attendance by states was as follows:

Alabama	53	Nebraska	25
Arizona	2	Nevada	0
Arkansas	51	New Hampshire ..	0
California	19	New Jersey	13
Colorado	21	New Mexico	0
Connecticut	2	New York	39
Delaware	0	North Carolina ...	18
Dist. of Columbia	20	North Dakota	1
Florida	19	Oregon	2
Georgia	20	Ohio	90
Idaho	0	Oklahoma	34
Illinois	112	Pennsylvania	29
Indiana	77	Rhode Island	4
Iowa	60	South Carolina ...	18
Kentucky	36	South Dakota	2
Kansas	76	Tennessee	126
Louisiana	47	Texas	60
Maine	0	Utah	3
Maryland	8	Vermont	2
Massachusetts	16	Virginia	9
Michigan	25	Washington	1
Minnesota	24	West Virginia	15
Mississippi	53	Wisconsin	29
Missouri	105	Wyoming	4
Montana	0		

Other Countries: Bahamas, 2; Canada, 6; Denmark, 1; Hawaii, 1.

By the afore-mentioned original literary contributions is meant papers publicly announcing important discoveries for the first time. The work of J. D. Ray and G. E. Whipple on the virulence and viability of hog-cholera virus, the research work of J. W. Patton on vitamin B₁ in its relations to nervous derangements in dogs, and the new virus vaccine for canine distemper announced by R. G. Green, were sensational contributions which will distinguish the Memphis meeting as a convention in fact.

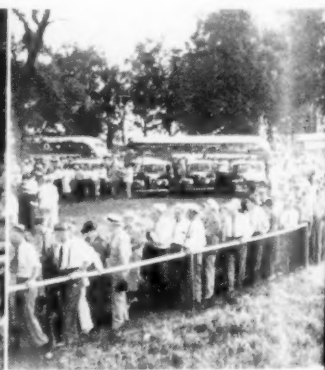
The sections on research, general practice, poultry, food hygiene, and small animal medicine all inscribed important material into the literature. While rabies was the gripping subject of the small animal group, many other important matters were covered. The way the convention-goers crowded into the small animal room is the proof of the growing popularity of that branch of veterinary medicine.



When the Association Went Picnicking . . .



. . . This Is What They Saw and Did



On the afternoon of Thursday, August 31, the Association adjourned its business and literary sessions to visit the Wilson Plantation in Wilson, Ark.—just across the Mississippi from Memphis—and partake of a real southern barbecue. One of the features of the outing was a mule race, with the mules being provided by the Plantation. The winners (shown in inset) were, left to right, W. A. Hagan, dean of the New York State Veterinary College, Cornell University, Ithaca, N. Y.; Starter C. H. Case (standing), associate editor of the JOURNAL and prominent cattle practitioner of Akron, Ohio; J. C. Flynn, a past president of the Association, Kansas City, Mo.; H. W. Schoening, chief of the pathological division, U. S. bureau of animal industry, Washington, D. C.; S. E. Hayes, practitioner of Hutchinson, Kan.; and J. D. Grossman of the department of anatomy, College of Veterinary Medicine, Ohio State University, Columbus, Ohio.

The other pictures tell in panorama of the festivities of that Thursday afternoon. The negro entertainers sang and danced; the doctors picked cotton; and everybody ate—plenty.

The work of the press room was regal. The Association received more newspaper publicity than at any previous meeting, thanks to Dr. Arnandez of Memphis and Mr. Stearns of New York City. The declaration of war abroad failed to crowd convention news off the front page.

One must compliment G. E. Mitchell for the wonderful educational exhibit he planned and displayed, the Veterinary Exhibitors' Association for the variety and completeness of their wing of the convention, and W. L. Gates for having set a new record for A.V.M.A. clinics.

There is no space here to tell the whole story of the Memphis convention. Besides the pictures of it, which we reproduce in this issue for the edification of those absent, the future issues of the JOURNAL will lay before our readers the many valuable manuscripts and discussions that the meeting created. Moreover, it is time to prepare for 1940 and attempt to marshall the members of the Association into the mood of breaking the 1939 record. The insigne for 1940 is "Visit the National Capitol."

Association Journals

IF AN ASSOCIATION journal is to flourish or even survive, it must be of such a character as to arouse the interest of all of its readers—in other words, all of the members of the association it represents. Nowadays, such a journal has to compete with a veritable deluge of periodicals, magazines, technical bulletins, house organs, pamphlets, radios, etc.

These facts were pointed out by President Bergman in his Memphis address in words that left no place for excuses. A journal that "will be of direct interest to every veterinarian in the country, regardless of his field of activity," in the manner quoted, was President Bergman's admonition to our editorial room. The editorial staff is primed to obey within its ability to do so and does not discount the wisdom of the suggestion.

This, we believe, is the first time that

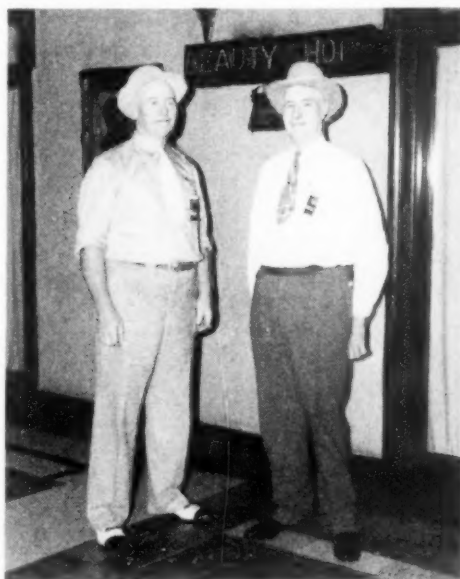
this detail has been pointed out in a presidential address.

Alumni Dinners

TO PREVENT recent history from repeating itself year after year, a change in the management of the alumni dinners is in order. Though these gatherings are intended to mobilize the good cheer of the meeting, they have, on the contrary, been sources of considerable complaint. Those in charge have failed to provide separate rooms for each of the colleges and, as a consequence, the objective of these dinners has been defeated. The intention in staging these affairs is to perpetuate the campus spirit of other days. Putting two or three colleges in one room or hurrying these jolly groups away from their programs to attend another function is a poor way to accomplish that purpose.

Alumni dinners properly planned and conducted can be made a fine attraction of our conventions. Up to the present time, they have not had that effect.

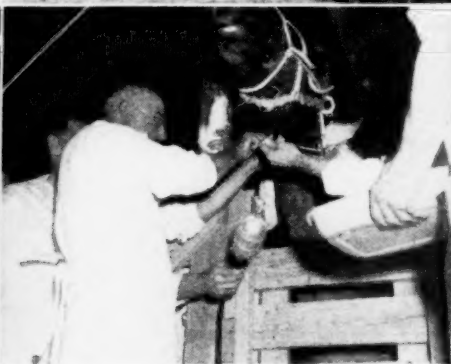
Among Those Present . . .



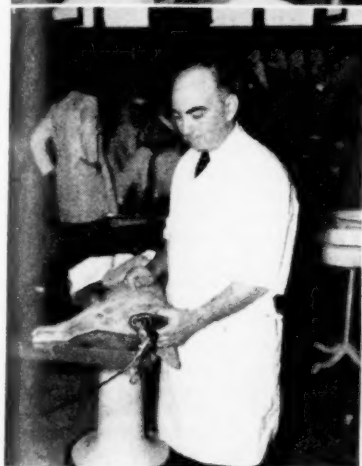
Here are the tallest veterinarians at the meeting. Left, Thomas W. Gidley of Malvern, Iowa (McK. '03), 6 ft. 8 in.; right, S. E. Hayes of Hutchinson, Kan. [Gr. Rap. '10], 6 ft. 6 in.



Clinical Highlight *of the* Memphis Meeting



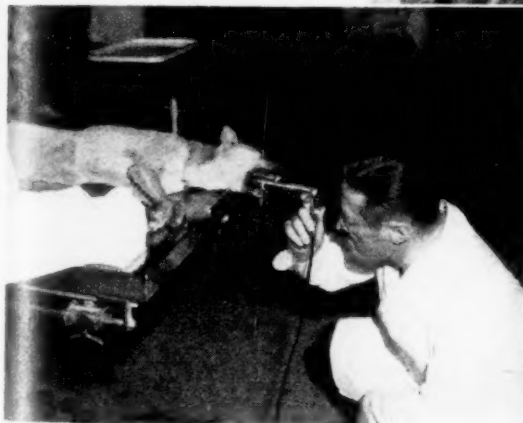
Upper left: W. L. Stroup of Corinth, Miss., demonstrates restraint of large animals. Upper right: J. K. Northway (in white, with hat) of Kingsville, Texas, spays a heifer. Center above: R. A. Gathmann of Franklin, Tenn., performs a herniotomy; to Dr. Gathmann's right are the well known Smith brothers of Indiana—C. Harvey and Walter F. of Crown Point and Valparaiso, respectively; farthest back (wearing glasses) is J. W. Scheibler of Memphis, Tenn., vice-chairman of the local Committee on Arrangements. Center: E. E. Wegner of the State College of Washington, Pullman, Wash., performs a cryptorchid operation; to his right are A. C. Topmiller, state veterinarian, of Murfreesboro, Tenn., and M. Jacob (third in picture), treasurer of the Association, of Knoxville, Tenn. Center left: W. A. Barnette of Greenwood, S. C., J. L. Hopping of Atlanta, Ga., and T. A. Sigler of Greencastle, Ind. (left to right), debleat a goat. Lower left: General view of the horse and mule clinic. Lower center: T. A. Sigler performs a roarer. Lower right: Another demonstration by W. L. Stroup of restraint of large animals.



Below: J. Gilbert Horning of Houston, Texas, widely known for his work on endoscopy, demonstrates the technic of this work in small animal practice. E. B. Mount (above) of Memphis, Tenn., assisted Dr. Horning in the demonstration.



Below: J. A. Bogue (left) of Wichita, Kan., and R. L. Anderes (right) of Kansas City, Mo., demonstrate various anesthetics used in small animal practice.



Small Animal Clinic

Upper left: A. A. Hermann of Denver, Colo., on operation for hypertrophy of prostate. Upper right: General view of north end of small animal clinic. Center: J. Wesley McKinney, M.D., of Memphis, Tenn., on corneal transplant.

Business Sessions — Seventy-Sixth Annual Meeting

First Session of the House of Representatives, August 28, 1939

THE OPENING session of the House of Representatives, held in conjunction with the 76th annual meeting of the American Veterinary Medical Association at the Peabody Hotel, Memphis, Tenn., August 28, 1939, convened at 8:00 p. m., H. D. Bergman, president of the Association, presiding.

PRESIDENT BERGMAN: The meeting will come to order. I now declare the first meeting of the House of Representatives of the 76th annual convention of the American Veterinary Medical Association to be in official session and ready for the transaction of business.

First, we shall have the roll call by states, to determine whether there is a quorum present.

... E. B. Ingmand, assistant executive secretary, called the roll. The following states and units were found to be represented:

Alabama	Nebraska
Arizona	New Jersey
Arkansas	New York
California	North Carolina
Dist. of Columbia	Ohio
Florida	Oklahoma
Georgia	Oregon
Illinois	Pennsylvania
Indiana	South Carolina
Iowa	Texas
Kansas	Vermont
Kentucky	Virginia
Louisiana	Washington
Maryland	West Virginia
Massachusetts	Wisconsin
Michigan	Wyoming
Minnesota	Veterinary Corps
Mississippi	U. S. B. A. I.
Missouri	

DR. INGMAND: We have a quorum.

PRESIDENT BERGMAN: A check of registration indicates that a quorum is present. If there is no objection, the minutes of the 75th annual meeting will not be read, as they were published in a special issue of the JOURNAL. As there is no objection, they stand approved as published.

The first item of business is the report of the Executive Board, which will be presented by H. W. Jakeman, the chairman.

DR. JAKEMAN: The majority of these recommendations of the Board are taken from the report of the special Committee on Reorganization. I believe that this report should be read first, to give a better idea of the reasons why some of the recommendations were made. I presume that you will want to act upon them separately.

This report was read to and approved by the Executive Board this afternoon. It includes the recommendations made.

... Dr. Jakeman continued, reading the following report of the special Committee on Reorganization.

Report of Special Committee on Reorganization

Your special Committee on Reorganization and revamping of the JOURNAL submits herewith its final report. The previous reports submitted to the Executive Board, House of Representatives and to the membership through the official organ have covered much of the work of this committee and, in the main, it is not necessary to refer to the work already reported. For that reason our report at this time will be confined to the period since the last Executive Board meeting, November 29, 1938.

During this period the special Committee has made two trips to Chicago, making a total of five to Chicago since the New York meeting. These meetings have been devoted to establishing a set-up in the Chicago office which would carry out the reforms outlined and solve many of the problems connected with making the A.V.M.A. a better, bigger and more serviceable organization.

Soon after establishing a staff in the office as authorized by the Executive Board at its November meeting, it became apparent that the suggestions and demands made by this committee were not being carried out. For this reason a special meeting was called in Chicago in February to ascertain the reason for the lack of proper and prompt carrying out of various orders which had been given. Definite instructions were given as to several matters which were to receive immediate attention, including certain JOURNAL changes, the publication of the proceedings of the New York meeting, and the new membership directory, both of which had been long neglected.

It was made clear to Dr. Merillat that, as executive secretary, he was being held responsible by the Committee. These instructions were not carried out on account of lack of co-operation in the office. Furthermore, due to glaring evidence of disregard for instructions issued, it became necessary for Dr. Merillat to request Dr. Hoskins to remain away from the office until he could communicate with the members of this committee to determine what might be done to establish a central office organization which could and would perform the various duties of the central office and give full co-operation to the reorganizing committee. During the period in which the members of the Committee were corresponding about the situation, a letter was received from Dr. Hoskins in which he stated that if existing conditions in the office were to prevail, he wished to tender his resignation. After careful consideration, it was decided that his official connection with the American Veterinary Medical Association, in the temporary position of editor of publications, should be discontinued. It was indeed with deep regret that the Committee found

it necessary to take this action, especially since Dr. Hoskins had carried much responsibility over a number of years and could have been of further service in the reorganization and development program. We were convinced, however, as the result of careful study for more than a year and a half, that our efforts to bring about desired changes could not be accomplished with Dr. Hoskins' inability to give full cooperation and support to the program and plans outlined. His connection with the central office ended on March 1, 1939.

Your committee had been trying recently to obtain a young man with a good educational background and sufficient executive experience to enter the office as an understudy to the executive secretary; in other words, to have someone who could handle the work of both the secretary and editor, if necessary. This should always be the case in the future so that the central office will not be a one-man affair. Many prospects were considered, but it was either a case of the individual's not being interested or not being suited for the work.

In June, contact was made with Eugene B. Ingmand and arrangements were completed for his entering the employ of the A.V.M.A. under the temporary title of assistant executive secretary. Dr. Ingmand has had wide experience in different fields of veterinary medicine. Although a young man, he has had experience in executive and editorial work, as well as in practice and other fields of veterinary endeavor. He is a good writer, speaks well and seems particularly fitted for the A.V.M.A. office. We are pleased to report that with the present personnel, including Dr. Merillat as executive secretary and Dr. Ingmand as assistant executive secretary, the A.V.M.A. office is functioning in a satisfactory and efficient manner. This is not only in connection with routine matters, but also in planning and developing means whereby it can be of greater value to the membership than heretofore.

It would not be right for this committee to omit paying tribute to the splendid work which Dr. Merillat is doing for the A.V.M.A. His exceptional ability as both an editor and executive has produced definite results. It would require too much time to give a detailed description of the many improvements and time-saving methods which have been introduced into the central office. However, for the benefit of those who have not had occasion to contact the office in a business way, we shall mention a few of these. A modern index filing system has been installed which simplifies record keeping so that one clerk has been eliminated. Changes have been made in the ordering of all supplies, which is now done by requisition. The correspondence is handled on a prompt, business-like basis. Changes have been made in establishing close cooperation with the associate editors, the Women's Auxiliary, student chapters, section officers, committees and resident state secretaries.

Other improvements include the preparation of a complete list of veterinarians not members of the A.V.M.A. A card system has been inaugurated whereby manuscripts are acknowledged the day they are received and the author advised of the probable time of publication

when accepted. A campaign has been carried on to increase the volume of advertising in the official organ with considerable success. Incidentally, the prices for advertising space have been increased and the JOURNAL subscription rate has been raised from \$4.00 to \$5.00. In addition to the induction into membership of 329 veterinary graduates of this year, there has been an additional notable increase in membership, due in no small measure to the efforts of the Chicago office as well as those of President Bergman during his travels. It is felt by this committee that the American Veterinary Medical Association can soon have a membership of at least 7,500 as its present program expands. Many plans are under way for increasing service and greatly enlarging the functions of the central office. Incidentally, this will be done not only without additional expense but probably with a considerable reduction in operating costs.

As far as the official JOURNAL is concerned, the Committee feels that the improvement in it speaks for itself. You no doubt have noted that it has been enlarged to 160 pages. Many comments which have been received indicate that the JOURNAL is of much more interest to members in all branches of the profession than heretofore. The matter of possible publication of two journals has been under consideration and will be discussed by the Executive Board. Improvement in the official organ will continue and various changes will be instituted from time to time. Your committee wishes to express publicly its appreciation of the splendid accomplishments of Dr. Merillat in bringing about many of the improvements in the JOURNAL.

Referring again to the manner in which various duties of the central office are being carried out, we would like to mention the fact that arrangements for the Memphis meeting have been handled most efficiently. Publicity was inaugurated early and the official program was published in the July issue and mailed out approximately two weeks before the opening of the meeting. All members received the official program as well as 4,000 non-members. Plans of floor space and contracts with exhibitors were completed months before the Memphis meeting and, instead of the usual complaints from prospective exhibitors, many complimentary remarks have been voiced.

During the two years in which the reorganizing committee has worked, it has been very apparent that our constitution and by-laws are inadequate to meet many situations that develop with an expansion of Association activities. This is especially so as regards the definition of responsibility and authority of governing officials and bodies. A revision of the constitution and by-laws has been made and will be presented for consideration at this meeting.

The matter of each section's having more autonomy has been receiving consideration. The recommendations in this regard of the Section on Research, as submitted to the Executive Board by H. H. Dukes, are being given a trial in that section this year.

The following recommendations are presented for your consideration.

I. That a committee be authorized consist-

ing of the chairman of the Executive Board, the president, and the president-elect, to be known as the Board of Governors of the American Veterinary Medical Association, to have executive authority and supervision of the central office, but not conflicting in any of its actions with the constitution and by-laws, or with existing functions of the Executive Board, and the House of Representatives; that this committee shall be responsible to and give a written report to the Executive Board at each of its meetings.

II. That the appointment of the executive secretary, the assistant executive secretary, and the editor of publications be vested in the Executive Board, and that the salaries and tenure of office of these employes be determined by the Executive Board.

III. That the Board of Governors shall constitute the Committee on JOURNAL.

IV. That the chairman of the Committee on Legislation shall be the executive secretary of the Association.

V. That the incoming Board of Governors give careful consideration and study to a reorganization of the Executive Board's set-up, especially with reference to the manner of electing Executive Board members.

VI. That the activities of the Committee on Public Relations shall be under the direct supervision of the Executive Board; that the executive secretary shall be ex-officio a member and act as secretary of the Committee; that the duties of the Committee shall be divided into two general fields: A) *Public relations*, to deal especially with informative and coöperative relations with other professional organizations, such as the A.M.A. and the A.D.A.; to promote closer relations with agricultural associations, experiment stations, breed associations, farm bureaus, agricultural extension service and vocational education, boards of health, etc., in an endeavor to increase and improve general relations; to establish closer relations with commercial manufacturers of veterinary products in order to correct irregularities in advertising the sale of biological products and other supplies to the laity, etc.; to contact legislative bodies, state regulatory officials, and other agencies where necessary in an endeavor to promote better legislation and official relations to the benefit of the membership. B) *Publicity*, 1) To outline a definite publicity program and employ such publicity agents as may best publicize the aims, activities, accomplishments and opportunities for service by the veterinary profession as an educational feature to the public. 2) To publicize the meetings of the Association to the profession in an endeavor to increase membership and stimulate attendance at all important meetings of the profession. 3) To curtail, through publicity, the activities of quacks, charlatans, "chiselers" and illegal and unethical advertisers, who are now virtually parasites that act to the detriment of animal industry, owners, the general public, and the profession as a whole.

VII. That the financial fiscal year shall be July 1st to July 1st.

VIII. That the A.V.M.A. shall take immediate steps to study and put in force a method of equitable distribution of state and federal

veterinary work. It is further recommended that steps be taken to assist states in developing, through civil service, a more secure status of state veterinary employes.

PRESIDENT BERGMAN: Gentlemen, you have heard the report of the special Committee on Reorganization. The adoption of this report, of course, will include the adoption of the various recommendations. What is your pleasure as regards the handling of this report? The suggestion of the chair is that the recommendations be taken up *seriatim*.

FLOYD PERRIN (Nebraska): I move that the recommendations be laid on the table until the next meeting.

PRESIDENT BERGMAN: Do I hear a second? I hear no second to the motion. If there is no objection, we shall proceed to act upon the recommendations of the special Committee on Reorganization *seriatim*.

I. D. WILSON (Virginia): Wouldn't it be better to hear the report of the Executive Board first? Wasn't this report made to the Executive Board?

PRESIDENT BERGMAN: This report was made to the Executive Board and these recommendations are included in its report.

DR. WILSON: Let us hear how the Executive Board handled these, before we consider the report. Wouldn't that be more proper?

DR. JAKEMAN: These recommendations have been acted upon by the Board and approved, and are submitted to the House for consideration. As they contain a few additional recommendations of the Board, you may want to hear those first. However, the President suggested action on the recommendations of the Committee on Reorganization first.

DR. WILSON: Do these recommendations of the Executive Board have any bearing on the report?

DR. JAKEMAN: These are the recommendations of the Executive Board that I have read. They were approved. The other recommendations have no bearing upon any of these.

DR. WILSON: I move, then, that we consider the report of the Committee on Reorganization.

PRESIDENT BERGMAN: If there is no objection, we shall proceed with the recommendations of the Committee.

DR. JAKEMAN: The first recommendation is, in substance, that the Committee on Reorganization be continued, and be known as the Board of Governors of the American Veterinary Medical Association. I shall read the recommendation.

... Dr. Jakeman read the first recommendation of the special Committee on Reorganization. ...

DR. JAKEMAN: In other words, the Committee recommended to the Board—and the Board approved the recommendation—that a committee be continued, functioning in much the same manner as the Committee on Reorganization, so that it can be consulted in all matters pertaining to the central office set-up and in the program of expansion which has been outlined for development.

A. A. HUSMAN (North Carolina): I move the adoption of that section of the report.

R. H. STEWART (Mississippi): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the first recommendation of the Committee be approved. Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

Dr. Jakeman read the second recommendation of the Committee.

PRESIDENT BERGMAN: You have heard the second recommendation of the Committee. What is your pleasure?

W. R. KRILL (Ohio): I move this recommendation be adopted.

J. L. AXBY (Indiana): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the second recommendation of the Committee on Reorganization be adopted. Is there any discussion?

DR. PERKIN: I should like to know what improvement this would be over the present set-up?

DR. JAKEMAN: It was felt that giving the power to the Executive Board to appoint these officers would allow a more deliberate study to be made of the qualifications of men to fill these offices. The present constitution and by-laws are insufficient in pointing out the duties of officers and the allocation of authority in so far as who will have the final voice. There is a chance for a deadlock that should be avoided. The Executive Board and the Committee on Reorganization felt that the Executive Board is the logical body to select an executive secretary and an assistant executive secretary, since it is in close contact with the office.

R. R. BIRCH (New York): May I ask one more question? Is the action of the Executive Board in this case subject to the approval of the House of Representatives?

DR. JAKEMAN: My interpretation of this recommendation is that it is subject to the approval of the House, as is any other recommendation. The existing by-laws make it subject to the approval of the House. That is, the Board selects a man and presents his name to the House, and he may be turned down. Then the Board has to call another meeting and recommend another man. If they proposed the second man and he were turned down, it might happen that at a given convention a secretary could not actually be elected.

DR. BIRCH: They [Executive Board] would have power to appoint a man, pending the meeting of the House of Representatives. They would have power to employ someone.

DR. JAKEMAN: The president, of course, could fill the vacancy, yes.

DR. HUSMAN: As the recommendation now stands, it leaves the matter entirely to the Executive Board. I still believe that the House should have some voice in the matter, and therefore I object to the motion as it stands.

D. D. STUBBS (Arkansas): Isn't it a fact that this would make it almost a three-man board, instead of the whole Executive Board? I want just to get this matter clarified.

DR. JAKEMAN: Are you referring to the appointment of a secretary?

DR. STUBBS: That is right.

DR. JAKEMAN: He would be appointed by the board of 13 members.

DR. STUBBS: Isn't it a fact that this board of three that you mention would have the authority to act without the endorsement of the Executive Board? And, if that board did act without the endorsement of the Executive Board, then isn't it a fact that the House would have nothing to say?—the House would have authority only to act upon the recommendations of the Executive Board?

DR. JAKEMAN: I am not getting your point as regards this particular provision for the appointment of the executive secretary.

DR. STUBBS: There are a lot of things upon which I am not clear.

DR. JAKEMAN: Of course, we have felt that the House of Representatives is the legislative body, but this is strictly an administrative matter in the executive office of carrying out the functions and duties of the office, and that it logically comes under the Executive Board rather than under the legislative body to choose these officers for the carrying out of the duties in connection with the central office and the secretarial work. That was one of the reasons for including this.

DR. STUBBS: What I am asking is this plain question: Is it a fact that it would practically be a three-man board instead of the Executive Board?—that the three men would have the preference of selections instead of the Executive Board?

DR. JAKEMAN: These officers are to be selected by the entire Executive Board.

DR. STUBBS: That includes the whole thing. The whole thing is a blanket problem.

DR. JAKEMAN: They are to be selected by the entire Board. The three-man governing board is responsible to the Executive Board. It consists of the president, the president-elect, and the chairman of the Board, and they, during the period between annual meetings and Executive Board meetings, are to carry on so that the Association can avoid having a one-man set-up and a one-man organization. It is a spreading of the responsibilities over a larger number of men. This motion here is that these men are to be chosen and elected by the full Executive Board of 13 members.

DR. STUBBS: I am not asking the question as a pro and con problem. I am trying to clarify the problem in my own mind. I thought that a minute ago it was brought out clearly that this board of three would set the salaries and do many other things.

DR. JAKEMAN: No.

DR. PERKIN: The purpose in making the first motion in acting on these recommendations was not to get off a little parliamentary procedure that would disrupt affairs, but to give the members of this House an opportunity to study over the recommendations, and we see, as we are starting out, that we are in more or less of a muddle. Now, on the recommendation just read it specifically states, almost, that the authority for electing a secretary will be taken away from the House of Representatives and vested solely in the Executive Board. It may be all right, but is it what we want? Has it been a fault with the past set-up that

the previous secretaries were elected as a recommendation from the Executive Board?

WALTER WISNICKY (Wisconsin): As I understand, this second recommendation transfers certain functions from the House of Representatives to the Executive Board. Now, I recognize that in handling a matter such as this recommendation covers, certain latitude in the operation has to obtain. Nevertheless, from my standpoint, I feel that the House of Representatives should still retain some measure of control, so that something in the future in the way of abuse of a situation like this will not occur. There is no limitation as to salary or as to any other qualifications, and so forth, that are prescribed. I think that if the recommendation contained certain reasonable limitations as to how far the Executive Board can go, I could go along with that recommendation, but as it stands now, I think it needs some improvement.

MASON WEADON (District of Columbia): I would like to point out that all of these recommendations have been given careful consideration by the Executive Board and, of course, we have not had an opportunity to study them. We meet only once a year, and I can see that the idea is to facilitate the handling of the business of the organization. From my point of view, I think it would be well for us to stand by the recommendations of the Board and pass them without further delay, because we really have not had time to give any careful consideration to them.

PRESIDENT BERGMAN: Is there any further discussion? The motion is that recommendation No. 2 be approved as presented. All those in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

... Dr. Jakeman read the third recommendation of the Committee.

DR. JAKEMAN: Perhaps I can give a word of explanation there. It seems that somewhere back in our history, the appointment of a committee on JOURNAL was authorized. That, I believe, was before we had a House of Representatives. That committee was to be appointed by the chairman of the Executive Board. At the time that the Committee on Reorganization started its work, of course part of the duties imposed upon it was that of revamping the JOURNAL. As chairman of the Board, I proceeded to appoint the Committee on Reorganization as the Committee on JOURNAL, and it seems logical that the Board which is to follow, the Board of Governors of this association, should constitute the Committee on JOURNAL, as they are the ones who will be in closest contact with the development of the publication, and any plans that are being carried out to try to improve our official organ.

Therefore, the recommendation that the Board of Governors shall constitute the Committee on JOURNAL was approved by the Executive Board, and is now submitted for your consideration.

PRESIDENT BERGMAN: You have heard the recommendation of the Committee on Reorganization. What is your pleasure?

W. A. BARNETTE (South Carolina): I move its adoption.

DR. WEADON: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the third recommendation be adopted. Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and the recommendation is adopted.

... Dr. Jakeman read the fourth recommendation.

DR. JAKEMAN: The object of this recommendation is to have the chairman of this committee at the head of the Association, where he should be, in the opinion of the Committee on Reorganization.

PRESIDENT BERGMAN: You have heard the fourth recommendation of the Committee on Reorganization. What is your pleasure?

DR. BIRCH: I move its adoption.

DR. KRILL: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the fourth recommendation be adopted. Is there any discussion? If not, all in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

... Dr. Jakeman read the fifth recommendation.

DR. JAKEMAN: We have no specific recommendation to make, other than that this be given careful study; we feel that the present method of electing members is not correct. We may have, in a given district, seven or eight men on a ballot, and perhaps 40 votes cast, which is not a healthy way of electing members to this important governing body. Hence, we have this recommendation that the incoming Board of Governors give careful consideration and study to reorganization of the Executive Board's set-up, especially with reference to the manner of electing Executive Board members.

A. T. KINSLEY (Missouri): I move the adoption of that recommendation.

JOHN WELLS (Florida): I would like to ask a question. Will that take into consideration a possible reapportionment?

DR. JAKEMAN: The Committee had that in mind—that the governing board should consider that appointment, and possibly (I think I am at liberty to say this—it is only an opinion I am giving now, and not an official recommendation of the Board) a redistricting arrangement of the United States and Canada.

DR. KINSLEY: My motion was for approval of the recommendation which, as I understand it, has primarily to do with the election of the Board members. I do not approve of that last part.

DR. JAKEMAN: I shall read the recommendation again: "That the incoming Board of Governors give careful consideration and study to a reorganization of the Executive Board's set-up, especially with reference to the manner of electing Executive Board members."

DR. KINSLEY: That is what I approve for adoption.

EDWIN J. FRICK (Kansas): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that this fifth recommendation be adopted. Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

... Dr. Jakeman read the sixth recommendation of the Committee ...

DR. JAKEMAN: There is quite a lot in that recommendation, but in substance it is to have the Committee on Public Relations handle both the public relations part of the work, which they have been doing, and to include also any publicity program which might be developed. We have merely defined a little more completely the duties of that committee and pointed out a few of the functions which we think they should perform.

JOHN H. GILMANN (Tennessee): I move the adoption of this recommendation.

L. J. POELMA (Maryland): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that this recommendation be adopted. Is there any discussion?

DR. BIRCH: May I ask for a little further explanation about the employment of publicity agents? I wonder what is in mind in that particular section.

DR. JAKEMAN: It is just carrying out the plan that has been in force the past two years of having some reliable concern—such as the Bureau of Industrial Service of New York, who handled the publicity of the New York meeting and are again in charge of publicity for this meeting—that they shall employ, in accordance with what might be voted for their use in employing publicity agents to execute this particular function.

PRESIDENT BERGMAN: Is there any further discussion? If not, all in favor of the motion, signify by saying, "aye"; contrary, "no." The motion is carried.

... Dr. Jakeman read the seventh recommendation ...

DR. JAKEMAN: This is merely providing a means of having an annual report from the treasurer at each annual meeting, which is compiled so as to record the financial status approximately up to the time of the meeting—to July 1. It will enable him to get his report ready for a July meeting. As is now the practice, the report goes up to the end of the year and it does not give a clear picture of our financial position.

DR. AXBY: I move the adoption of this recommendation.

I. S. McADORY (Alabama): I second the motion.

PRESIDENT BERGMAN: Is there any discussion?

DR. KINSLEY: I should like to ask Chairman Jakeman, how long is it since we changed the fiscal year?

DR. JAKEMAN: This is just the financial fiscal year; not the fiscal year of the Association. It will run the same—from January 1, on—but this is to enable the treasurer to give a clearer picture of our actual financial standing at the time of our meeting.

PRESIDENT BERGMAN: All those in favor of the motion, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

... Dr. Jakeman read the eighth recommendation of the Committee ...

PRESIDENT BERGMAN: You have heard the last recommendation of the Committee on Reorganization. What is your pleasure?

DR. HUSMAN: I move its adoption.

DR. WEADON: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the recommendation be adopted. Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

DR. AXBY: Would you read recommendation No. 4 again? I am just questioning the phraseology here, as to intent.

DR. JAKEMAN: "That the chairman of the Committee on Legislation shall be the executive secretary of the Association." It should be the other way around: "That the executive secretary of the Association shall be the chairman of the Committee on Legislation." We shall make that correction.

PRESIDENT BERGMAN: We shall now hear the report of the Executive Board, Dr. Jakeman, chairman.

DR. JAKEMAN: The Board recommends that the zoning plan for the holding of conventions be approved and recommended to the House for adoption, with the provision that Canada also be included in the subdivisions, as follows: That Manitoba, Saskatchewan, and Ontario be included in zone 1; Quebec and the Maritime Provinces be included in zone 2; and British Columbia and Alberta be included in zone 4.

DR. MERILLAT: Is obtaining some copies of this zoning plan, which is self-explanatory and, as you know, was worked on last year, I believe most of you had an opportunity to study it at that time.

PRESIDENT BERGMAN: We shall defer action on that and take up the next recommendation.

DR. JAKEMAN: This next recommendation is a rather minor one, in one sense, pertaining to the presentation of the president's key and accompanying scroll. The Board approved the recommendation, and is now bringing it before the House for approval. As you recall, last year the practice was started of presenting past presidents' keys. It was decided that this was not altogether the right thing to do—that it should be a president's key. It was also decided that the key should be presented to the president-elect at the opening session of the convention, which will be a few days before the time that he is actually installed into office, so that it will be an emblem of his office during the year, and that at the end of his year of service he should receive a scroll, which is a certificate of distinguished service rendered to the Association.

Therefore, the Executive Board recommends that the president's key be presented at the opening session of the convention and that the certificate of service be presented at the closing session of the House of Representatives the following year.

It was also recommended that the word "Past" be removed from the presidents' pins distributed last year, for those who wish to have this done.

As you recall, there were some 18 of these pins given to past presidents at the banquet last year, and any of the gentlemen who received one of the pins will have the opportunity of returning it and having the word

"Past" removed, if the House of Representatives supports this recommendation.

PRESIDENT BERGMAN: Dr. Merillat is getting copies of the proposed zoning layout to distribute to the members of the House, before taking the question up in detail. Hence, we shall now take up this second recommendation. There are just the two to be presented by the Executive Board at this time. This one involves the presentation of the president's key and scroll. You have heard the recommendation of the Executive Board. What is your pleasure?

DR. STEWART: I move the adoption of the recommendation.

WILLIAM H. IVENS (Pennsylvania): I second the motion.

PRESIDENT BERGMAN: Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

While we are waiting for Dr. Merillat's return, we will take up the next item of business, which is the secretary's report. This will be presented by E. B. Ingmand, assistant executive secretary.

... Dr. Ingmand read the report of the executive secretary ...

Report of the Executive Secretary

The secretary's office is concentrating upon several activities which I shall describe briefly.

Membership.—Although we are 76 years old and have been publishing a periodical monthly since 1877, 30 years as sole owner, it is unfortunate that no census of the veterinary population was ever taken and systematically revised. No dependable directory of veterinarians has ever been compiled, indispensable as such a directory is in building a membership of a society such as ours.

The difficult task of compiling an accurate list of veterinarians in this country is well under way. When complete, and with constant revision, we shall have a workable mailing list that will stand this association in good stead for many years to come. The resident state secretaries, state veterinarians and others have cooperated to the fullest extent in this activity.

A folder describing the advantages of membership in the A.V.M.A. was prepared at the direction of the Executive Board, and this together with an application blank was started on its way to gain new members. Thus far, 3,213 circulars have been mailed to non-member veterinarians in 28 states and, within the next 60 days, we expect to complete this work. As a follow up, a copy of the JOURNAL is mailed after an interval of two weeks. While a sufficient amount of time has not elapsed to appraise fully the virtue of this method of approach, the response thus far is most gratifying. In addition, the program of the Memphis meeting was mailed to 3,383 veterinarians residing within a radius of 500 miles of Memphis, and it is hoped that this additional effort will stimulate added interest in this association.

It is a pleasure to report that 679 applications were received during the year (July 31,

1938—August 1, 1939). This is the largest number of applications received in one year for a long time. For the same period a year previous, 371 applications were received. Part of this great increase is due to the high percentage of recent graduates joining the Association. Of the 499 students graduated from the ten veterinary schools this year, 329, or 67 per cent, have applied for membership. During the same period last year, 31 students joined the Association. This large enrollment should be credited largely to the efforts of the deans and faculty members of the veterinary schools, for without their wholehearted cooperation the program would have failed. To these men the Association owes a debt of gratitude. Particularly gratifying is the increased number of non-members who have seen it fit to join our association. It signifies that this society has something really worthwhile to offer to every veterinarian regardless of his interest.

In a country such as ours, national societies are as necessary as national government. Their purpose is to keep their enterprise advancing in accordance with the problems of each period and, more particularly, to keep the organization from crumbling into a useless heap. Although each unit (state) of a society such as our national organization is intended to govern itself within stated limitations, the national hook-up is the instrument of power and action. It is the instrument that makes up a united front precisely to the same relative extent that the federal government coordinates the labors of 48 states into a mighty democracy.

There are about 145,000 physicians practicing in the United States. Of these, over 113,000 are members of the American Medical Association, which in membership, achievement, and influence is conceded to be the greatest medical group of all time. These figures are conclusive evidence that the eligible physicians of this country are practically unanimous in the matter of allegiance to their national association and obviously aware of the influence that allegiance has over their professional activities.

The purposes of societies of this order are clearly set down in their basic codes. They are formed and maintained to advance educational standards and practice methods and to synthesize public opinion accordingly. What lie within these fundamental objectives are the well known details of our many labors, too numerous to catalog here. Suffice to declare from facts of record in this office, there is a vast difference in the degree of allegiance to their professions between physicians and veterinarians. The one has seized the opportunity to build up a gigantic society, the other has yet to become imbued with the idea. The fault does not lie entirely with the non-member. The story of organized veterinary medicine has never been told and many were never invited to join. They have occupied the house in which they live for so many years without paying any rent that they can justly claim a squatter's right to the shelter built for them. Some may claim not without reason that the shelter built for them has not amounted to much. The means has never been caught up with the will to do

so and here is the vicious circle the non-members can overcome without any delay. In the manner of speaking, it is up to you.

There are a number of projects that require this association's action but which can not be undertaken for the lack of funds, and funds can come only from membership. Councils on foods and drugs, investigational work on practice laws, rules and regulations governing public service by private practitioners, and other untouched subjects are awaiting the loyalty of all veterinarians licensed to practice.

Dues.—The dues situation at the present time is in a much improved condition. During June, July and August of this year an intensive effort was made to collect back dues and, as a result, the sum of \$2,843.52 was collected. This may be compared to the \$553.40 collected during the same period in 1937. At this time the records of the Association show that 4,664 have paid their dues for 1939, 358 owe for 1939, and 158 owe for 1938.

It might be mentioned here that many of the men who now owe for 1938 and even 1939 have paid up back dues and expect to liquidate their present indebtedness in the next few months. All members who have made a dues payment, even though their account is not current, were put back on the JOURNAL mailing list and it is believed that the improved JOURNAL in itself will help greatly to induce these members to pay up their dues.

The resignations of six members have been tendered during the year and, in addition, 224 were dropped from the membership roll for failure to pay dues. Many of these men owed dues for three and four years and should have been dropped before this. This effort more or less wipes the slate clean.

Deaths.—During the year the deaths of 72 members, four former members and 50 non-members were reported in the JOURNAL.

Honor Roll.—The honor roll at the present time bears the names of three men: C. W. Crowley (1876); L. H. Howard (1882); and, for the first time, J. W. Connaway (1890) of Missouri.

Tait Butler (1887), whose name appeared on the honor roll for the first time in 1937, passed away during the year.

The Journal.—A survey of our periodical made by experienced scientific journalists brought certain facts to our attention that have led to considerable improvement from both the technical and professional points of view. The main reform in the making through this guidance is to fulfill the obligations of an association periodical, which should be a thing quite different from a drab journal of science, lacking in human interest, variety and news of its special world systematically gathered for each issue. Faults in makeup have been corrected, modern usage in the editorial room adopted and the mental horizon extended. The objective of your editorial staff is to produce a well balanced magazine covering the various branches of veterinary medicine that will neither offend the scientific mind nor overlook the smallest detail of clinical work. Large type, small pages and a

plethora of ultrascientific articles lacking in general interest and often unrelated to veterinary medicine were pointed out by competent judges as major faults of the JOURNAL. It is fundamental in professional journalism that the everyday work of all readers be considered. To ignore this fact is to run headlong into injustice, unpopularity, and waste of white space.

On account of lack of space and acceptance of ill-chosen manuscripts, the office has a long list of unpublished articles received months and even years ago. These have been the subject of considerable criticism. Some of these are being rejected, others we are returning to the authors for any changes they may wish to make, and still others are held for future attention, hopeful that we shall be able to find space for them in the near future. To accept and publish articles for the mere reason that they are offered for publication is nothing short of folly. The editorial staff has turned over a new leaf in this respect. Manuscripts received are now acknowledged on arrival and this is followed by a letter of acceptance or rejection at an early date.

Dealing with authors who are members of the Association is no little problem. Every man who prepares a manuscript and offers it to the JOURNAL naturally thinks it is "tops," but if our staff is to publish a journal that will meet with the approval of the majority, it must be, plainly speaking, "hard boiled." All manuscripts must pass the censorship of the editorial room, which may mean sending manuscripts to an associate editor for approval. The associate editors are indispensable. They are helpful in deleting undesirable material, prolixity, faults in tables, graphs, and cuts, and unsupportable statements. An editorial staff has knowledge not only of the material but also of the author and thus protects the reader against fallacies and the periodical itself against criticism. A rewrite man who is a student of journalism is employed to keep your JOURNAL free of literary infelicities. Our object is to make the Journal of the American Veterinary Medical Association something for you to esteem and welcome as a monthly visitor to your home or office.

Our task of rehabilitating the official organ has really just begun. It will require considerable time to perfect the fact-finding organization through which matters of interest shall arrive without interruption. The editorial staff will never lack an abundance of excellent manuscripts, but what we need most of all is well chosen clinical data that is free of fiction and exaggeration. Practitioners appear to feel that veterinary medicine is soaring over their heads and, consequently, hesitate to put their observations on paper. Perish the thought. Yours is the proving grounds for the man of science. We crave to be your godfathers and your tutors within the scope of our ability. Writing not only makes the author known beyond the boundary of his bailiwick, but it also helps his fellow veterinarians.

Increasing the size of the JOURNAL from 96 to 160 pages necessitates an increased monthly cost of approximately \$575.00. This will be partly offset by an increase in advertising rates effective with the September issue. And, as the circulation is increased, corresponding adjust-

ments in advertising rates will be made. The subscription list has grown considerably this year as a result of the special student offer. At present we have 258 student subscribers. This reduced rate will again be available to the students this fall.

Particularly gratifying is the favorable reception of the improved JOURNAL by our advertisers. It is quite apparent that they realize that this publication is the outstanding medium for contacting the veterinary profession.

The JOURNAL in its improved form is our best membership getter, so to speak. It is "clicking" with the readers and it is certain to bring many non-members into the fold.

General Remarks.—We are keeping the budget balanced, notwithstanding the fact that an accrued indebtedness of 1938 amounting to \$4,203.81 was paid this year. The bills are as follows:

Dr. Zimmer's expense to meeting of Executive Board	\$ 29.20
Gold medal for veterinary honor student	23.50
Premium on bond for Dr. Jacob	100.00
New York World's Fair exhibit	2,848.66
Educational exhibit at 1938 meeting ..	89.63
Hotel Pennsylvania (1938 meeting expense)	18.98
Raritan Hospital (vitamin experiments)	652.54
Dictaphone machines	427.00
German translations (Dr. Volkmar) ..	14.20

Your association maintains an excellent office that is being appointed with modern equipment, and a personnel is being trained in modern methods of accounting, correspondence, filing, mailing, and editorial work. Methods of office management applicable to our special field are being studied and put into operation.

It would be unkind were this report not to contain words of praise for the Committee on Reorganization, which was approved by the House of Representatives at the 74th annual meeting (1937) on the recommendation of the Executive Board. This committee studied the innermost needs of the Association for two years and it is through their service that the office of the executive secretary is able to put reforms into operation. In order to prevent the affairs of the Association from operating without executive guidance, outside of the office itself, we would recommend that such a committee be made a permanent part of the official roster and that its duties be defined in the constitution and by-laws.

A.V.M.A. HOUSE OF REPRESENTATIVES

Voting Strength, as of August 1, 1939

Alabama	2	Illinois	3
Arizona	1	Indiana	2
Arkansas	1	Iowa	4
California	4	Kansas	3
Colorado	2	Kentucky	2
Connecticut	2	Louisiana	1
Delaware	1	Maine	1
Dist. of Columbia ..	1	Maryland	2
Florida	2	Massachusetts	2
Georgia	2	Michigan	3
Idaho	1	Minnesota	3

Mississippi	1	Rhode Island	1
Missouri	2	South Carolina	1
Montana	1	South Dakota	2
Nebraska	2	Tennessee	2
Nevada	1	Texas	2
New Hampshire	1	Utah	1
New Jersey	2	Vermont	1
New Mexico	1	Virginia	2
New York	4	Washington	2
North Carolina	2	West Virginia	1
North Dakota	1	Wisconsin	2
Ohio	4	Wyoming	1
Oklahoma	2	Veterinary Corps	2
Oregon	2	U. S. B. A. L.	2
Pennsylvania	3		
Total: 96			

PAYMENT OF DUES AND DISTRIBUTION OF MEMBERSHIP

State, etc.	Paid	D-1	D-2	Totals
Alabama	89	9	6	95
Arizona	19	2	1	22
Arkansas	31	2	2	35
California	335	25	6	366
Colorado	73	7	1	81
Connecticut	54	4	2	60
Delaware	16	1	0	17
Dist. of Columbia ..	46	0	0	46
Florida	71	3	2	76
Georgia	55	6	0	61
Idaho	28	1	2	31
Illinois	220	9	4	233
Indiana	129	5	5	139
Iowa	298	19	8	325
Kansas	145	10	6	161
Kentucky	53	2	0	55
Louisiana	35	5	2	42
Maine	29	1	1	31
Maryland	73	5	3	81
Massachusetts	82	5	0	87
Michigan	149	10	5	164
Minnesota	191	15	5	211
Mississippi	32	5	0	37
Missouri	129	19	3	142
Montana	29	1	0	30
Nebraska	107	5	13	125
Nevada	11	3	0	14
New Hampshire	16	0	0	16
New Jersey	106	9	3	118
New Mexico	19	0	1	20
New York	310	31	10	351
North Carolina	43	7	2	52
North Dakota	40	4	1	45
Ohio	294	25	13	332
Oklahoma	87	7	4	98
Oregon	57	4	2	63
Pennsylvania	245	34	4	283
Rhode Island	14	0	1	15
South Carolina	28	2	6	36
South Dakota	52	9	5	66
Texas	138	7	3	148
Tennessee	60	4	1	65
Utah	31	4	2	37
Vermont	19	4	0	23
Virginia	72	5	4	81
Washington	75	4	4	83
West Virginia	31	0	1	32
Wisconsin	116	6	2	126
Wyoming	17	1	1	19
Alaska	1	0	0	1
Canal Zone	5	0	0	5
Hawaii	12	0	0	12
Puerto Rico	6	1	1	8
Philippines	9	3	1	13
Canada	99	15	7	121
Foreign	42	2	2	46
Honorary	41
	4,564	358	158	5,080

DEATHS—JULY 31, 1938—AUGUST 1, 1939

Members

Adams, J. D.	Keller, T. O.
Adams, L. H.	Kinsley, E. F.
Alexander, O. C.	Kritt, A. A.
Andrade, J. S.	
Beckwith, J. W.	Lemay, D.
Bernhart, A. O.	Longacre, W. S.
Blatchford, F. M.	Mackie, F. H.
Boiger, D. L.	Marshall, C. J.
Bose, R. G.	McClean, F. H.
Butler, Tait	McIntyre, H. H.
Buttle, N. A.	Meisner, H. A.
	Meredith, S. M.
Chase, C. S.	Middaugh, L. H.
Cornehl, H.	Mills, C. C.
Crump, T. W.	Moody, G. C.
	Moye, K. J.
Dodge, I. M.	
Dodge, L. N.	Neary, W. E.
	Newton, W. H.
Edelman, F. J.	Niles, W. B.
Elgas, A.	
	Parker, F. F.
Findlay, J. J.	Pearson, R. A.
Fridiriel, U. G.	Posse, G. A.
Gilson, J. E.	Raffensperger, H. B.
Goddard, C. H.	Robnett, E. V.
Goodman, R. A.	Rowan, F. B.
Graham, J. J.	
Graves, H. W.	Schlegel, J. O.
Graybill, H. W.	Scott, T. O.
	Selkin, W. J.
Hart, J. P.	Smith, R. V.
Hartke, G. B.	Swan, W. R.
Hayes, F. M.	
Hennessey, W. J.	Van Ness, W. R.
Holkenbrink, A. H.	Van Vranken, H. S.
Hopper, F. M.	Vetterling, H. A.
Hunsberger, R. S.	Vulliamy, H. F.
Jakeman, W. W.	Wilder, J. L.
Jones, M. J.	
	Yates, V. W.
Kay, D. S.	
Kesley, P. T.	

Non-Members

Bower, M. A.	Johnson, W. C.
Brandewie, W. J.	
Britt, I. H.	Kopp, J. D.
Cates, F. T.	Lynch, G. N.
Chandler, T. W.	
Chapin, S. N.	Malcolm, A. F.
Clark, N. T.	McGowan, R., Jr.
Clark, W. G.	Miller, C. E.
Clevenger, J. L.	Miller, F.
Cottrell, L. A.	Miner, M. L.
	Murphy, H.
Doid, J. W.	Murphy, W. H.
	Murray, C. P.
Erganbright, C. H.	Richardson, D. F.
Evarton, C. G.	
	Ridgway, W. J.
Farrar, K.	Rogers, W. B.
Flynn, J. A.	Schofield, J. F.
	Springer, S. M.
Garr, E. S.	Stephenson, W. H.
Goodale, O. M.	Swain, S. H.
Guldager, F. H.	
	Thiele, L. W.
Harrison, J.	Tritle, F. L.
Heide, J. C., Sr.	Tudor, O. A.
Hill, G. C.	Turner, C. L.
Hoge, S. E.	
Horn, A. H.	White, R. T.
	Wilson, J. E.
Jeffries, H. N.	Woods, J. K.
Johnson, C. H.	

Former Members

Anderson, M. O.	Peters, A. T.
Ireland, J. W.	Rogers, H. C.

PRESIDENT BERGMAN: You have heard the report of the secretary. What is your pleasure?

DR. GILLMAN: I move that the secretary's report be approved.

DR. KRILL: I second the motion.

PRESIDENT BERGMAN: Is there any discussion?

E. C. W. SCHUBEL (Michigan): I wish to voice my hearty approval. I shall be glad to take this report back to the members in the State of Michigan. It is a fact that some of us old-timers in Michigan have noticed this improvement without being told. I, for one, certainly do approve of this new set-up. In going about among the practitioners, I have heard that they have seen this change. They are interested in the JOURNAL now, whereas in years gone by they threw the JOURNAL on the desk and that was the end of it. You could find it there in the folder month after month. That is not the case today. I know that these fellows who were hard-boiled before, had no use for the Association, are reading the JOURNAL, and saying what a different publication it is and how much they can get out of it now. So, I am carrying back to my Michigan colleagues this wonderful report. You did not tell half the story. You have been very modest.

PRESIDENT BERGMAN: Thank you, Dr. Schubel. I hope that you have expressed the sentiment of at least the majority of the delegates.

The motion is now before you. All those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

... Copies of the proposed zoning plan were distributed ...

PRESIDENT BERGMAN: I think that you have all received copies of the proposed zoning plan and, with a further word of explanation by Dr. Jakeman, we shall take action.

DR. JAKEMAN: If you will take your pencil and just continue the lines up from some of the zones, of which I shall give you a listing, you will see how Canada becomes a part of this zoning plan. Manitoba, Saskatchewan and Ontario are to be included in zone 1. In other words, if you continue the line of zone 1 right up, that will include those three provinces. If you continue the line of zone 2 up, you will have Quebec and the Maritime Provinces. Zone 4 will include British Columbia and Alberta. That makes three zones in Canada. Is it clear, or do you wish to ask any questions?

DR. WILSON: I should like to know how the veterinary populations in these various zones compare.

PRESIDENT BERGMAN: That is a very good question. The proposed zone 1 has 1,758 members and 3,543 non-members. That is the zone in which it is proposed that the meeting be held every other year. Zone 2 has 1,715 members and 1,021 non-members. Zone 3 has 950 members and 1,200 non-members. Zone 4 has 900 members and 1,200 non-members. It is proposed that the meeting be held in zone 1 every other year, and in zones 2, 3, and 4 every fourth year. Zone 1 has by far the largest veterinary population. Are there any other

questions on the proposed zoning plan?

D. E. WESTMORELAND (Kentucky): I move that the plan be adopted.

S. E. HERSHEY (West Virginia): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that this recommendation of the Executive Board be adopted. Is there any further discussion?

DR. KINSLEY: This is a rather interesting study. I am wondering if we know just how things happen. There may be another international congress, or something else happening. It looks like we are getting this to run by rule—1, 2, 3, 4. Can't we trust ourselves to have these meetings where they will do the most good? Here, we are practically forcing a certain section or district for each year's meeting. Let us have a little leeway, I say.

DR. BIRCH: I presume it came up for discussion during the time that this was being decided, but I should like to know why the Province of Ontario was included in zone 1 rather than in zone 2. It is near zone 2.

L. A. MERILLAT (Exec. Sec'y): Canada has not a very large veterinary population. It was rather a question of population, so they stretched it out over the whole Dominion of Canada.

DR. BIRCH: It adds to the population of zone 1 and takes from the population of zone 2. I wonder if that came up for discussion, and just what reason was given for that assignment.

DR. JAKEMAN: It did come up for discussion, and Dr. Cameron, the Executive Board member from Canada, made the recommendation that it be included in zone 1.

DR. BIRCH: Did he give any reason?

DR. JAKEMAN: No, except that geographically, he thought, Quebec and the Maritime Provinces naturally belong in zone 2.

DR. WRADON: I would like to ask what suggestion is made in case the particular area chosen for a given year has no city which will submit an invitation.

PRESIDENT BERGMAN: We have little concern in that respect, judging from the number of invitations that we have at the present time. I suppose we could solve the problem, if something should develop. Dr. Merillat says that there would be nothing to keep us from going to a place without an invitation, if we so desire. The total A.V.M.A. membership in Canada, of course, you understand, is not very great. I believe it is about 146.

DR. SCHUBEL: I wonder if you would allow Dr. MacDonald to speak. As I understand, he would be in zone 1, and I would be glad to allow him the privilege of speaking on this very thing. He would tell you exactly that—the fact that they have only about 125 members with a potential 1,800 veterinarians there that we might get in this area. I wonder if there would be any objection if I ask him to speak.

PRESIDENT BERGMAN: Is that Dr. MacDonald of Canada? He could speak only by unanimous consent of the House. If what he has to say might be informative and of value to the House, and you wish to give him unanimous consent to speak, I shall rule that he may speak. Is there any objection to hearing Dr.

MacDonald? I hear no objection. Dr. MacDonald, will you speak briefly?

H. S. MACDONALD (Toronto, Ontario): I do not know if I am in order in coming forward or not. I am an executive member—a member of the Executive Board of the Ontario Veterinary Association. We have a few members in Ontario, and here is the thing that we observe: All of your states are represented, but there is no representation from Canada.

PRESIDENT BERGMAN: That is Canada's fault.

DR. MACDONALD: I am willing to apologize. But the younger element are willing to make up for that, and are trying to do so.

DR. MERILLAT: You ought to have a member of the House of Representatives from Ontario. An invitation has been extended to you.

DR. MACDONALD: I am sure we should be pleased to have a member here. There is something at fault there, certainly. I will admit that.

PRESIDENT BERGMAN: Doctor, none of the provinces have affiliated with the Association on the same basis that the states have. Section 11 reads: "There shall be a House of Representatives, consisting of one representative for each of the various state, territorial and provincial veterinary medical associations. Each representative shall be chosen or appointed at an annual meeting of his association." Now, not one of the provinces, according to my understanding, has ever affiliated.

DR. MACDONALD: If it is not too late to rectify that situation, we shall be very pleased to have a representative in the House. We have an active organization at the present time, and the sentiment in Ontario is that we should be allied closer to the A.V.M.A. That is entirely my reason for being here.

It was last April that we started. I have been a member of the A.V.M.A. for 15 years. I have attended five conventions and derived a lot of benefit from them. Personally, I should regret very much to see the profession in Canada sever its connection with the A.V.M.A., but there is a sentiment, and it is strong, too, at the present time, to form our own organization in Canada, aside from the A.V.M.A., a separate organization entirely—our own Canadian organization. My sentiments are that we should adhere to the A.V.M.A., because we get benefit from you that we could not get from our own Canadian organization. But, there is a strong feeling at the present time that we should sever our connection.

DR. AXBY: Why?

DR. MACDONALD: For the simple reason that we are not represented in the House of Representatives.

PRESIDENT BERGMAN: Doctor, it is your own fault that you are not represented.

DR. MACDONALD: Our members do not realize that.

PRESIDENT BERGMAN: All you need to do is to get an application blank from the A.V.M.A., elect a delegate, and fill it out.

DR. MACDONALD: That is just what I am getting at. I have come down here from Toronto to invite the A.V.M.A. to Toronto for the year 1941. I understand that there are other cities ahead of us, but we are still presenting our application. Personally, I should like to be

represented here; I should like to see Ontario represented; I should like to see the various provinces represented; and I think that with a little encouragement we could very easily have a representative from each province. I do not know the rules or the laws of the A.V.M.A. in that regard.

PRESIDENT BERGMAN: Doctor, our executive secretary will see that the Ontario Veterinary Association is advised as to the proper procedure to become affiliated with the A.V.M.A. We thank you for your remarks. Do you approve of this plan that you were supposed to speak about?

DR. MACDONALD: Dr. Cameron explained that to me a little while ago, and in my opinion it is a very good idea. But, Mr. Chairman, may I ask you a question? May I make application at the present time for representation on your board?

DR. MERRILLAT: If you apply now, and the members of your association approve it, you will be a member in two minutes, right here. Your association would have to approve it. There is a blank form that is sent out to the associations. The man must be duly elected or appointed, and then approved.

DR. MACDONALD: That has to be approved by the Association? Therefore, any application I should make now would carry no weight. In other words, I have to go back to Canada to find out just where I stand. Then, if I go back, and we make application in due form, we will have representation?

PRESIDENT BERGMAN: The provincial association of Ontario would first have to arrange for affiliation with the American Veterinary Medical Association.

DR. MACDONALD: Are we affiliated at the present time?

PRESIDENT BERGMAN: You are not. Not a single province of Canada has affiliated.

DR. MACDONALD: Would you like us to be affiliated?

PRESIDENT BERGMAN: Certainly, we would. It is provided for in our constitution and by-laws. We would welcome you with open arms.

DR. MACDONALD: In other words, you would appreciate having an increase in membership from Canada. That is exactly what we want to know.

PRESIDENT BERGMAN: Our constitution and by-laws provide for affiliation.

DR. MACDONALD: I belong to the A.V.M.A. and, apparently, I have carried very little weight in all of my years as a member because I reside in Canada. Is that true?

PRESIDENT BERGMAN: You can be a member of the A.V.M.A. without your province being affiliated.

DR. MACDONALD: But what weight do we carry in Canada, all the members that we have?

PRESIDENT BERGMAN: You are not affiliated. You have no representation.

DR. MACDONALD: To be perfectly frank with you, we have come down here, and I am the only representative from Toronto, and I think Dr. Merrillat will agree that we have a very nice place to stage a convention. But, we have come down here and carry very little weight.

DR. MERRILLAT: You do not carry any weight

in this body. The only representation that Canada has here is that on the Executive Board, representing district No. 1. In this legislative body you have no representation, through no fault of ours, because the constitution provides that provinces and states may appoint members to this body.

... Discussion off the record ...

PRESIDENT BERGMAN: It has been moved and seconded that the recommendation of the Executive Board on the zoning proposal be adopted. All those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

The next item on the agenda is the report of the treasurer, M. Jacob.

... Dr. Jacob read his prepared report ...

Financial Report—M. Jacob, Treasurer

A.V.M.A. and Journal Funds

January 1, 1939, to July 31, 1939, Inclusive

Bank Balances—December 31, 1938... \$ 1,838.74

RECEIPTS FOR PERIOD

Received from Secretary:

A.V.M.A. Fund \$13,275.25

Journal Fund 21,997.80

\$34,373.05

Interest on U. S. Government Bonds:

A.V.M.A. Fund 470.00

Journal Fund

\$ 470.00

Loan to Women's Auxiliary, Mrs. H. Preston Hoskins, Treasurer,

Paid A.V.M.A. Fund... 500.00

Total Receipts 35,343.05

\$37,181.79

DISBURSEMENTS FOR PERIOD

A.V.M.A. Fund \$24,214.27

Journal Fund 11,807.03

Total Disbursements .. 36,021.30

Bank Balances—July 31, 1939..... \$ 1,160.49

Revolving Fund in Hands of L. A.

Merrillat, Executive Secretary..... 1,000.00

Total Cash Resources..... \$ 2,160.49

United States Government Bonds

(\$37,000.00 Par Value) at Cost.... 37,321.57

Total Assets July 31, 1939..... \$39,482.06

Total Assets December 31, 1938..... 39,660.31

DECREASE IN ASSETS FOR PERIOD..... \$ 178.25

DISTRIBUTION OF ASSETS

	Cash	Bonds at Cost	Total
A.V.M.A.			
Fund (\$44,548.23)	\$ 5,821.94		(\$38,726.29)
Journal			
Fund 46,708.72	31,499.63		78,208.35
Totals ...	\$ 2,160.49	\$37,321.57	\$39,482.06

Journal Fund	
January 1, 1939, to July 31, 1939, Inclusive	
Balance in Bank December 31, 1938.....	\$37,417.95
RECEIPTS FOR PERIOD	
Received from Secretary.....	21,097.80
	<u>\$58,515.75</u>
DISBURSEMENTS FOR PERIOD.....	11,807.03
Bank Balance July 31, 1939.....	<u>\$46,708.72</u>
Total Cash Resources.....	\$46,708.72
United States Government Bonds at Cost	31,499.63
Total Assets July 31, 1939.....	\$78,208.35
Total Assets December 31, 1938.....	68,917.58
INCREASE IN ASSETS FOR PERIOD.....	<u>\$ 9,290.77</u>

DISTRIBUTION OF ASSETS

Cash	Bonds at Cost	Total
\$46,708.72	\$31,499.63	\$78,208.35

A.V.M.A. Special Fund—No. 2	
January 1, 1939, to July 31, 1939, Inclusive	
Bank Balance December 31, 1938.....	None
RECEIPTS FOR PERIOD	
Received Interest on U. S. Government Bonds	\$ 68.75
	<u>\$ 68.75</u>
DISBURSEMENTS FOR PERIOD.....	None
Bank Balance July 31, 1939.....	<u>\$ 68.75</u>
United States Government Bonds at Cost	\$ 5,069.06
Total Assets July 31, 1939.....	\$ 5,137.81
Total Assets December 31, 1938.....	5,069.06
INCREASE IN ASSETS FOR PERIOD.....	<u>\$ 68.75</u>

DISTRIBUTION OF ASSETS

Cash	Bonds at Cost	Total
\$68.75	\$5,069.06	\$5,137.81

A.V.M.A. and Journal Funds

January 1, 1939, to July 31, 1939, Inclusive

Bank Balances—December 31, 1938.....		\$ 1,838.74
RECEIPTS FOR PERIOD		
Received from Secretary—		
A. V. M. A. Fund.....	\$13,275.25	
Journal Fund	21,097.80	\$34,373.05
Interest on U. S. Government Bonds—		
A. V. M. A. Fund.....	\$ 470.00	
Journal Fund		470.00
Loan to Women's Auxiliary, Mrs. H. Preston Hoskins, Treasurer, Paid A.V.M.A. Fund...		
		500.00
Total Receipts		<u>35,343.05</u>
		\$37,181.79
DISBURSEMENTS FOR PERIOD		
A. V. M. A. Fund.....	\$24,214.27	
Journal Fund	11,807.03	
Total Disbursements		<u>36,021.30</u>
Bank Balances July 31, 1939.....		\$ 1,160.49
Revolving Fund in Hands of L. A. Merillat, Executive Secretary		1,000.00
Total Cash Resources.....		<u>\$ 2,160.49</u>
United States Government Bonds (\$37,000.00 Par Value) at Cost.....		\$37,321.57
Total Assets July 31, 1939.....		\$39,482.06
Total Assets December 31, 1938.....		39,660.31
DECREASE IN ASSETS FOR PERIOD.....		<u>\$ 178.25</u>
DISTRIBUTION OF ASSETS		
	Cash	Bonds at Cost
A.V.M.A. Fund	(\$44,548.23)	\$ 5,821.94
Journal Fund	46,708.72	31,499.63
TOTALS	<u>\$ 2,160.49</u>	<u>\$37,321.57</u>
		<u>\$39,482.06</u>

A.V.M.A. Fund

January 1, 1939, to July 31, 1939, inclusive

Bank Balance December 31, 1938	
(Overdraft)	\$35,579.21
RECEIPTS FOR PERIOD	
Received from Secretary, \$13,275.25	
Received Interest on U. S.	
Government Bonds	470.00
Loan to Women's Auxiliary, Mrs. H. Preston Hoskins, Treasurer, Paid	500.00

Total Receipts 14,245.25

\$21,333.96

DISBURSEMENTS FOR PERIOD..... 24,214.27

Bank Balance July 31, 1939

(Overdraft)\$45,548.23

Revolving Fund in Hands of

Dr. Hoskins 1,000.00

Total Cash Resources (Deficit)....\$44,548.23

United States Government Bonds at

Cost 5,821.94

Total Assets July 31, 1939 (Deficit) ..\$38,726.29

Total Assets Dec. 31, 1938 (Deficit) .. 29,257.27

DECREASE IN ASSETS FOR PERIOD.....\$ 9,469.02

DISTRIBUTION OF ASSETS

Cash	Bonds at Cost	Total
\$44,548.23	\$5,821.94	\$38,726.29

Salmon Memorial Fund

January 1, 1939, to July 31, 1939, inclusive

Bank Balance December 31, 1938.....\$ 491.80

RECEIPTS FOR PERIOD

Received Interest on U. S. Government Bonds 116.87

\$ 608.67

DISBURSEMENTS FOR PERIOD..... None

Bank Balance July 31, 1939.....\$ 608.67

Total Cash Resources.....\$ 608.67

United States Government Bonds at

Cost 9,127.37

Total Assets July 31, 1939.....\$ 9,736.04

Total Assets December 31, 1938..... 9,619.17

INCREASE IN ASSETS FOR PERIOD.....\$ 116.87

DISTRIBUTION OF ASSETS

Cash	Bonds at Cost	Total
\$608.67	\$9,127.37	\$9,736.04

A.V.M.A. Relief Fund

January 1, 1939, to July 31, 1939, inclusive

Bank Balance December 31, 1938.....\$ 3,349.30

RECEIPTS FOR PERIOD..... None

\$ 3,349.30

DISBURSEMENTS FOR PERIOD..... None

Bank Balance July 31, 1939.....\$ 3,349.30

DISTRIBUTION OF ASSETS

Cash
\$3,349.30

PRESIDENT BERGMAN: You have heard the report of the treasurer. What is your pleasure?

DR. IVENS: I move that it be accepted.

DR. McADORY: I second the motion.

PRESIDENT BERGMAN: Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

We shall now hear the report of the Committee on Education, by N. S. Mayo.

... Dr. Mayo presented his prepared report. [To be published.]

PRESIDENT BERGMAN: You have heard the report of the Committee on Education. What is your pleasure?

R. A. HENDERSHOTT (New Jersey): I move the acceptance and the approval of the report.

DR. ARBY: I second the motion.

PRESIDENT BERGMAN: You have heard the motion. Is there any discussion? All in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

I understand that neither Dr. Booth nor Dr. Milks, chairmen of the committees on veterinary biological products and proprietary pharmaceuticals, respectively, are present. Is Dr. Campbell, of the Committee on Public Relations, present? I shall therefore call for the report of the Committee on Rabies, by Colonel R. A. Kelser.

... Lt. Col. R. A. Kelser presented the prepared report of the special Committee on Rabies.

COLONEL KELSER: This report has the approval of five of the six members of the Committee. It does not have the approval of the sixth member of the Committee, M. F. Barnes. Dr. Barnes was invited to submit, if he so desired, a minority report, and, Mr. President, I understand that such a report has been prepared. While I have not seen it, I recommend that Dr. Barnes be permitted to read his own minority report.

PRESIDENT BERGMAN: We shall now hear the minority report of the Committee, Dr. Barnes.

M. F. BARNES: Mr. Chairman, it is a rather embarrassing situation, after listening to the good report Dr. Kelser just presented, to present a minority report.

... Dr. Barnes continued, reading his prepared report.

PRESIDENT BERGMAN: Gentlemen, you have heard the minority report of the special Committee on Rabies. The question is, shall the minority report be substituted for the majority report? All those in favor, signify by saying, "aye"; contrary, "no." The majority report is before you.

DR. HERSHEY: This is a very important report. Our neighborhood has been a hotbed of rabies for a number of years, and we have advocated vaccination to a certain extent, but it was always with a reservation. No vaccine in human medicine, in its infancy, was 100 per cent effective. Why, then, should antirabic vaccine be so considered? We use it and advocate it, with all due restriction as to time, and under certain conditions. If there is anyone from the biological department of Washington here, perhaps he can give us some further information on this subject. Unfortunately we

have had several deaths in the human family in our town from rabies, and that is one reason that I am interested.

DR. AXBY: Gentlemen of the House: I do think that if there is any one subject at this time that deserves serious consideration by the Association, it is the question of rabies vaccine. As the chief sanitary officer for Indiana, I want you to know that rabies is on the increase and that I am having difficulties each year to meet the situation, and am not adequate to the task.

The state house is in the middle of the City of Indianapolis. They have their own city ordinances and I have endeavored to conduct my official duties in such a manner as to avoid conflict with the will and desire of the municipality.

Two years ago, rabies was very prevalent in Indianapolis and Marion county. They endeavored to control it themselves through the carrying out of what, they thought, was an adequate municipal ordinance, but failed. As a result, a great deal of conversation took place, many people were interviewed, and the city council passed an ordinance practically equal to compulsory vaccination but to the effect that before anyone can get a dog license, which he has to have, or is supposed to have, he must present a certificate of vaccination.

That has been in effect now shortly over one year. The fact of the matter is, it reduced the number of dog licenses, but it increased the number of vaccinations, and the condition of rabies in Indianapolis has been reduced. But, Mr. Hillman, a regular writer for the *Indianapolis Star*, opposed this in its original form, continued to oppose it, representing the kennel organizations, and each week has been writing articles in opposition to rabies vaccine. I am telling you that it has stirred up more than a tempest in a teapot in Indiana.

Now, we are confronted with the situation, is there virtue in vaccination, or is there no virtue in vaccination? I listened attentively to the report of the majority on this Committee, and recognized the qualifications and the dependability that we have reason to place in those gentlemen who signed that majority report. I also listened to the minority report by my good friend Barnes, and I am not unmindful of his qualifications, his honesty, and his sincerity. There is no doubt that this Committee should be continued, of course, but it does occur to me that we at this time, from a standpoint of scientific determination, are on the spot, and it is up to somebody—some individual or some collection of individuals—to make such statements and such recommendations as can be proved out in the field by actual experience.

In my opinion, taking into consideration the financial losses applied to the so-called lower animal and the danger to the human, there is nothing that can come before this Association that is more imperative and demanding of definite reply than the question of rabies vaccine.

DR. BARNETTE: Under the existing conditions, I want to make this motion: that the majority report of this Committee be received as infor-

mation, and that a committee be continued on rabies vaccination.

DR. WELLS: I second the motion.

PRESIDENT BERGMAN: You have heard the motion that this majority report be received as informative material and the Committee be continued. Is there further discussion?

J. D. JONES (Louisiana): Before this vote is taken, I wish to give a record, accurately kept through the Louisiana state health department, through one of their official health unit agencies. In 1936, in Morrows Parish, La., 87 people received rabies treatment after they had been bitten. It prompted the police jury of that parish to attempt in some measure to do something to end the disease, or help stop it. That fall an ordinance was passed, and 6,700 dogs, including all types—large livestock dogs, hunting dogs, mongrel curs, poodles, and so on—were treated. The same thing was done in '37 and '38.

I wish to report that in the past two years we have not had a single case of rabies in this parish. Not a single person has taken treatment. I do not stand here to tell you that I think rabies vaccination is 100 per cent or near 100 per cent effective, but I do know of rabid dogs that came from adjacent parishes and attacked and severely bit, in one instance, eleven known dogs, and not one of those dogs developed rabies. Only a 6-week-old unvaccinated puppy developed rabies, and was proved to have rabies.

I do not personally feel that it is that good. We have no doubt had good luck. It is probable that rabies vaccine does not approximate the merit that I credit it with having, but in over 15,000 dogs in three years time, a decrease of 87 people to 0 persons receiving treatment is worth your consideration.

DR. FRICK: Rabies is the most horrible disease that we face. I think that stands without any question. I feel that Colonel Kelsor's report was entirely fair—vaccination is not perfect. I should like to ask Colonel Kelsor if he feels that the Committee should be enlarged upon, and if he feels more money should be allocated to that project before this committee is reappointed.

COLONEL KELSOR: I might say, Mr. Chairman, that it was impossible to hold a meeting of this committee because of the fact that the various members were spread from California to the East Coast, and from Minnesota to Washington. There was \$100.00 appropriated. It was not feasible to hold a meeting of the group. Before the first of the year, all of the Committee members were invited to mail to my office a statement as to their own opinion regarding rabies vaccine, so that I could have it typed and sent to all of the Committee members. All except one of the Committee responded promptly and he sent his communication later.

I feel that it would be desirable, of course, to continue the Committee. It may be desirable to broaden its numbers. I do not know whether that would make it unwieldy or not. It might be desirable to enlarge it by one or two members. But, I do want to say that I

believe that this thing should be acted upon before we leave Memphis. You can talk all you wish about continuing an experiment. If this is an experiment, we have been carrying it on for 16 years, and we are being told not by the scientific press that the thing is no good, but by the lay population—people who are anti-this and anti-that. If this project has been an experiment, it has been a costly one, extended over a period of 17 years, and we have not yet determined whether or not all the vaccine used during those 17 years, at an enormous expense by a large number of veterinarians, is of value, and we have to have a lay group say that it is not, and we pass it up and go over another year when the press is filled with articles in magazines, daily journals, and newspapers.

I think that we have evidence to say definitely that this vaccine, as it has been used, has been of some value. We have not said that it is effective 100 per cent—far from it. We say that it has fallen far short of the goal. But, if we are not in the position now to say that we have not been practicing a worthless thing for 17 years, then I say that the veterinary profession of today is in a bad light, and I do not believe that there is a majority here that feels that we have used rabies vaccine for 16 or 17 years to no avail. To claim that it is not harmful is to make a weak, indirect, negative statement. We ought to say that it is of no value or that it is of value, and I think it has been of some value.

Now, to say that multiple doses should be put on an experimental basis, if for no other reason than analogy, basically it is a common, logical, well known, elementary fact that if one dose of an antigen will produce a certain amount of immunity, then multiple doses will produce more. We have not said that this thing should be made compulsory. There was not a single item in our majority report that indicated that rabies vaccine should be put on a compulsory basis. We said that it should not be compulsory. It is up to the individual.

When you, as an individual, or this association, as an association, is asked point blank whether the treatment we have used for 16 or 17 years is a "racket," we ought to be in a position to say whether it is or it is not. I think that if this report is carried over for another year, we shall have twice as much material that has appeared in papers and magazines during the last year pile up, and we are evading an issue that is before us right now. We should take some definite action on it before we leave Memphis.

I meant to call attention to the fact that at the Oklahoma meeting in 1935, this association adopted a resolution approving rabies vaccination as it has been practiced.

... Colonel Kelser submitted a copy of the resolution.

Resolution*

WHEREAS, Rabies is a menace to the public health and to the livestock industry in many parts of America, and

*Adopted at the 72nd annual meeting of the Association, Oklahoma City, Okla., August 27-30, 1935.

WHEREAS, Dogs act as the principal reservoirs and spreaders of this infection, and

WHEREAS, A number of years of field experience has demonstrated the efficiency of prophylactic vaccination against rabies when administered by qualified veterinarians, and

WHEREAS, The results of research work dealing with this subject indicate efficiency for rabies prophylactic vaccine; therefore, be it

Resolved, That the American Veterinary Medical Association endorses and recommends the annual prophylactic vaccination of dogs in those areas where rabies is known to exist, and be it further

Resolved, That this association recommends, however, the continuance of employment of proper sanitary police measures, combined with vaccination by qualified veterinarians, in combating and controlling rabies, and therefore, be it further

Resolved, That this association condemns the practice of distributing rabies vaccine for use by unqualified persons.

J. D. JONES: I move that this majority report given by Dr. Kelser and his coworkers be approved as read.

PRESIDENT BERGMAN: The motion before the House, duly seconded, is that this report be received as an informative report and the Committee continued, so your motion is out of order at the moment.

DR. KINSLEY: Could that be amended like this: Move that the report be received and referred to the Executive Board for action prior to the adjournment of this meeting so that the information can go out? If that is proper, I will move that the motion be so amended.

PRESIDENT BERGMAN: It is perfectly in order. You have heard the amendment proposed by Dr. Kinsley. Is there a second?

H. M. O'REAR (U.S.B.A.I.): I second the motion.

PRESIDENT BERGMAN: You have heard the amendment. Is there any discussion? If not, all those in favor, signify by saying, "aye"; opposed, "no." The motion is carried, and the amendment is adopted.

You now have before you the original motion as amended. All those in favor, say, "aye"; opposed, "no." The motion is carried.

DR. WISNICKY: As a matter of information, will the minority report appear in public form for reading by the membership?

PRESIDENT BERGMAN: It would be perfectly in order, yes.

DR. WISNICKY: No action is required on that point?

DR. MERILLAT: It can be deleted by the Committee on JOURNAL, but it will not be. Unless we are told not to publish it, it will be published.

DR. HENDERSHOTT: Would a motion that the minority report be included in the written proceedings be in order?

PRESIDENT BERGMAN: It will not be necessary. It will be included.

DR. HENDERSHOTT: While I am on my feet, I would like to ask Colonel Kelser a question.

In the light of recent developments with the growing of viruses on embryonated eggs, is it your feeling that in the next few months or the next year we will have available a better type of rabies vaccine to use in the prevention of rabies in dogs?

COLONEL KELSER: The growth of the rabies virus on the developing chick embryo has not been attended with nearly as much success as some of the other filterable viruses. In other words, there has been inability to propagate it in enormous quantities, such as you get in the encephalomyelitis virus. However, the work is being continued, not only with the chick embryo. You can grow it by inoculating into the brain of the chick embryo, but work is being continued with tissue cultures—that is, the growing of brain tissue. I feel personally that when rabies virus can be produced in enormous quantities, we shall be able to immunize to a much greater extent than is possible with the present type of vaccine. I happen to know that that work is going on in a number of laboratories at the present time.

DR. HENDERSHOTT: That answers the question for me, and bolsters the reason for my "no" vote. I do not believe that we are ready to go on record as advocating the use of vaccine in the prevention of rabies as a regulatory measure, and, of course, the Committee has indicated that it should not be compulsory. Still, we, as veterinarians, are giving to the public the idea in the statement that we endorse the treatment of dogs prophylactically and curatively with rabies virus. It would seem to me that developments are coming in the next few months that possibly would give us a right to make a bold statement either for or against it, and stand behind it. I much prefer to see this report, as recommended earlier, set aside until we have more information on which to base our statements.

FRANK M. WILSON (Iowa): I should like to hear what Dr. Schoening of the U. S. bureau of animal industry has to say about the bureau's standards.

PRESIDENT BERGMAN: Dr. Schoening is not a member of the House. If you request that he speak, the chair will rule that he be allowed to speak with the unanimous consent of the delegates. Is there any objection to comments from Dr. Schoening? I hear no objection to Dr. Schoening's speaking to the House.

H. W. SCHOENING: I have listened to the report of the majority of the Committee, and the minority report, with a great deal of interest and I am heartily in favor of the majority report. It seems to me, as Colonel Kelser has aptly stated, that it is imperative for this association to take some definite stand at this particular time. To postpone any action would, I think, becloud the issue, and I see no hopes, personally, of arriving at a solution to the improvement of our present rabies vaccine in a short time. That is, I think that it is going to be a matter of several years, at least.

In the first place, experimentation has to proceed usually with the laboratory animal as a starter, and any information derived from that source must be applied eventually to the dog, because what applies to a laboratory animal

does not necessarily apply to the animal on which one is actually going to apply the product. For example, we know that anthrax products are quite effective when they are used in cattle, horses, and sheep, but those same products can show no efficacy when used on guinea pigs, for example, and if we were to base our conclusions as to the efficacy of anthrax products on what they do in guinea pigs, we would say that they have no value. But, we know that this is not the situation, that these products do have definite value and can be shown experimentally to have such value in the larger animals. This is also substantiated by field experience over a period of years.

Therefore, I think that the same situation prevails as far as rabies is concerned: that it is going to take some time before we know whether or not we can improve the present product. That, in my opinion, will be probably two or three years. Experimentation on rabies is, I think, one of the most difficult problems of the research man. It is a disease that has peculiarities. It is quite difficult at times to infect animals; the incubation period is long; and there are many factors that enter into the situation that make the results turn out perhaps a little bit different from what we might expect, and the experiment must be repeated. They are time-consuming. Animals must be kept a long time—at least six months, and possibly longer—before one can conclude what the result of his experimentation has been. So, on the basis of that, it will take a long time before we can feel sure that we have an improved product.

In the meantime, I think we have sufficient evidence from the laboratory and from the field to indicate that the product has some value. It certainly is not 100 per cent, by any manner of means. We do not have any biological product that does have that efficacy. I think that if we recognize its limitations, the product has some value and can be used in a control program. As the Committee has pointed out, it is not to supplant any of the recognized means, but is simply an adjunct to help to keep the ball rolling. It is perfectly possible to control and eradicate rabies without using vaccines at all. But, in some territories, this can not be accomplished for one reason or another, and the vaccines are employed to help the situation along.

PRESIDENT BERGMAN: Thank you, Dr. Schoening. Since this majority report will be discussed before the House again on Thursday evening, I am now going to close the discussion and proceed with the agenda.

DR. IVENS: Before you close it, might I move that there be more money appropriated for that committee's work?

DR. ABBY: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that additional money be appropriated for the use of the special Committee on Rabies. I shall see that it comes before the Budget Committee. All in favor, signify by saying, "aye"; opposed, "no." The motion is carried.

We shall hear the report on Nomenclature of Diseases and Vital Statistics by Dr. Kernkamp.

H. C. H. Kernkamp presented his prepared report. [To be published.]

PRESIDENT BERGMAN: This report, gentlemen, is submitted as a progress report. It really needs no action. However, this committee should be continued, so I will hear a motion.

DR. HENDERSHOTT: I move that the Committee be continued, and that Dr. Day's successor be named to that committee.

DR. HUSMAN: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the report be accepted and the Committee continued, and the successor be appointed of the late Dr. Day. All in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

Dr. Brandly, I understand that you have the report of the special Committee on Poultry Diseases. Would you like to present it? Dr. Beach, chairman of the Committee on Poultry Diseases, is not present. Dr. Brandly has the report signed by all the members of the Committee. We will ask him to present it at this time.

... Dr. C. A. Brandly presented the Committee's prepared report. [To be published.]

DR. FRICK: I move that the report be accepted, the recommendations adopted, and the Committee continued.

DR. HENDERSHOTT: I second the motion.

PRESIDENT BERGMAN: You have heard the motion, which has been regularly seconded. Is there any discussion?

DR. WISNICKY: I merely want to make this observation: Perhaps there might be some duplication of effort between the committee on nomenclature and the effort that this poultry committee is making to compile nomenclature on poultry diseases. Perhaps, by bringing this matter up in a discussion way, they will be able to eliminate this potential duplication.

PRESIDENT BERGMAN: That is a very good suggestion, and we shall see that it is carried out.

Is there any further discussion? If not, all in favor of the motion, signify by saying, "aye"; opposed, "no." The motion is carried.

Gentlemen, the hour is getting late. There is another session of the House scheduled for Thursday evening at 8:30. That means that it will be necessary for the delegates to return early from the barbecue and general program of entertainment that afternoon.

DR. HUSMAN: Before we adjourn, I should like to move that the discussion which will come up about the meeting of the Association in 1941 be made a special order of business at promptly 10:00 that night.

DR. AXBY: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the invitations for the 1941 meeting be made a special order of business at 10:00 on Thursday evening. All in favor, signify by saying, "aye"; contrary, "no." The motion is carried. We stand adjourned until 8:30 on Thursday evening.

... The meeting adjourned at 11:25.

Tuesday Morning Session

August 29, 1939

THE OPENING SESSION of the 76th annual convention, held at the Peabody Hotel, Memphis, Tenn., August 28 to September 1, 1939, convened at 10:40 a. m., H. D. Bergman presiding.

PRESIDENT BERGMAN: The meeting will please come to order.

I now declare the 76th annual convention of the American Veterinary Medical Association to be officially in session.

Will you please rise for the invocation, to be given by Reverend Robert Johnston Bateman, pastor of the First Baptist Church of Memphis.

... The audience arose ...

REVEREND BATEMAN: Almighty God, our Father, we meet these friends as our guests with great happiness and delight. We extend to them, O Lord, in the name of all that is gracious and compassionate and friendly in our own natures, all the welcome that home people can have, coming among their own. So, we ask Thy blessing upon this group. We thank Thee for men and women who have knocked at the door of truth and have been admitted, and have lighted the path for us, and our lives have been made richer and better and finer and higher and broader because of their research and their contributions.

Let Your blessing abide upon these who bring their messages after great toil. Do Thou come and grant that as these truths are presented, we shall be happier and richer all over the earth because of the meeting and the messages of this meeting.

We bless Thee for this industry, we thank Thee for this science, and we ask Thy blessing upon these people who have come. Many of these are a long way from home; many of them have interests at home that are very dear to their hearts, so we pray that Thou shalt bless these here and grant that no mishap or unpleasantness or grief shall befall any of these, and grant, also, that Thou shalt overshadow and be the guardian protector of those who are beloved, from whom they are separated, and the interest of their heart and the responsibility that rests upon them. Grant that Thou shalt help them to find in these days not only a greater and a further sight in the research of their profession and responsibility, but that there shall be a comfort and there shall be a joy and fellowship. Teach us, we pray Thee, our Father, to find Thee in the every-day walks of our life, and let Your blessing abide here.

Grant Thy favor individually and personally, and keep us to do Thy will, each of us as we go our way, and when we have had our last observation in life and come down to its evening, grant that we should look beyond its golden bars of the sunset time into the white road passing through the open gate that leads into the Celestial City.

We pray that for each of us and all for whom we pray and love and think, people everywhere, in the name of Jesus Christ, our Lord. Amen.

PRESIDENT BERGMAN: You will be favored with a vocal solo by Mr. C. H. Hensley of Memphis, who will announce his own number.

... Mr. Hensley sang and the audience applauded ...

PRESIDENT BERGMAN: In the absence of the Honorable K. D. McKeller, United States Senator from Tennessee, the address of welcome will be given by the Honorable Walter Chandler, representative to Congress from the ninth Tennessee district. Representative Chandler. (Applause.)

REPRESENTATIVE CHANDLER: Mr. President, ladies and gentlemen of the American Veterinary Medical Association and your friends and the visitors to this convention: Senator McKeller has asked that I express his very keen personal regret that he can not be here today. Unfortunately, he is detained in Washington on official business. When he accepted the invitation, I think he told Dr. Jacob that it might be possible that he could not be here. Dr. Jacob then wrote me a letter and asked if I would sit in reserve to "pinch hit" for him if the occasion required, and here I am.

Of course, you would not expect a speech from me of the type that you would have received from the distinguished senator from Tennessee. He is a great senator, a useful public servant, and a man beloved all over this great state of ours. I am just a congressman—a mere congressman who represents the district in which you are having your meeting, and who represents the people here who are delighted to honor you at this convention.

The city in which you are meeting is a second-growth city. Memphis was formed a little over 100 years ago, and up until the year 1860, grew rapidly. In that year, it was the fastest-growing city in America; Brooklyn was second; and Chicago was third. But, with the coming of the Civil War, and Reconstruction, which was worse, and followed by four scourges of yellow fever, the City of Memphis was wiped out.

Pitiless creditors put us in the hands of a receiver and sent us through bankruptcy, but with the year 1880, Memphis began to grow again. She has blossomed like a rose, or flourished like a Green Bay tree—take your own choice from the section of the country from which you come. Today, you see around you the developments of just 60 years. This city today has a population of 280,000 people. We are first in many things in Memphis, but I hope that when you leave here, you will have found that we are first in hospitality—southern hospitality—that kind of hospitality which makes you feel at home, that kind of hospitality which we would like to send out to you, that we would hold fast to some of the best traditions of the old South and keep abreast with the hurry and the progressive atmosphere of today.

Yes, we are glad to have you here. I am not going to make any long speech, because this is a speech of welcome. I want to say to you that Memphis has grown from her adversities. We have profited by the troubles and sorrows, as you will see around you, and I am delighted that we have now no unusual weather for your meeting.

The importance of your meeting in this city can not be overestimated. At once, it is a challenge to the people of the South as to how

they may improve the broad areas which have suffered from a one-crop production; it is a challenge, also, to us of this city, which is in the very midst of the South, may I say, of our possibilities as a city in which there should be assembled a tremendous industry through the growth of livestock production and livestock processing, which is certain to come to the South.

Perhaps you are forerunners in this convention of a great development in this part of our nation. I think you are, because with our green pastures, with our running and still waters, with our very broad areas of low-priced land, we do have the possibilities of a new development to take the place of cotton, on which we have found ourselves one year in opulence, and the next year in poverty. As some man has said, "Cotton growing is chicken one day and feathers the next."

Memphis is already developing, as a matter of fact, because we have a great mule market here, for example. Memphis is already developing into a tremendous market for the production of animal husbandry, and the city is prepared to meet the demands of this new industry and is prepared to furnish added facilities.

Your meeting here today is just what we want, and it is no normal welcome that I want to give you. May I say, as you probably expected Senator McKeller to say, that the facilities of the federal government are being put more and more at the disposal of the American veterinarian—they are being put more and more at the disposal of the things which you represent, the things that you are trying to propagate and promote and develop in this country of ours because we have furnished the money, we have furnished a great bureau of animal industry in the Department of Agriculture, and we are proud of Dr. Mohler, because he has been our friend down South, and I hope to see him while he is here, because he has been a true and loyal friend of this section of the country, as he is of the others.

Your coming here in this American Veterinary Medical Association is sort of the conjunction, as it were, of your side of this thing, but you are here to show us how to improve our live stock, to better promote this animal husbandry that we talk about, and representing every state in the Union, as you do, and even Canada, as I understand, and representing also in your membership the veterinary service of the American army, with over 5,000 members. I tell you I congratulate you on a great organization.

You are here to demonstrate your essential part in the great national enterprise that is indispensable to the health and the welfare, not only of lower animal life, but of human life as well.

Finally, this thought comes to me: When we realize that the field of activities of the veterinary profession includes medical and surgical practice and education, research, regulatory service, such as meat and milk inspection, and the control and eradication of animal diseases, we are bound here in the Southland to recognize your importance to your profession, not only in the protection, as I said, of animal

health, but in the protection of human life as well.

Now, as far as Congress is concerned, let me assure you without any hesitancy that the federal government wants to go forward and go on with you in the great work that you are doing. Let me assure you that you may count with confidence on the continuance of the support of Congress, particularly the legislative branch of the government, in all the idealistic things that you are trying to work out for the benefit of mankind as a whole. Yes, you may count on that, thoroughly and earnestly.

We are glad to have you here. We want you to have a fine time. This city is yours while you are here. We want you to feel that you really belong in part to Memphis, because there is an old saying here which arose in the days before we had the paved streets, that if a person once got Memphis mud on his feet, he would never get it off. We hope you will go around to some of the out-of-the-way places and get a little Memphis mud on your feet, because we would like for you to stay here a long time with us.

As I take my seat, I would like to express in better words than my own, through an old hymn, the way we really feel on your coming here today. Personally, your profession has always fascinated me, if I may digress to say that. You must be mind readers; you must be able to understand from the look in the eye of a dumb animal and from the antics of an animal that is ill, just what is the matter with him, because he can not tell you in any other way. It must be a fascinating profession to you; it must be a profession which gives you great hope for the future. Yes, I am sure that you enjoy the work you are doing. I am sure that in this meeting here, which will bring out much of the new that you have not learned and thought about before, you will teach us—for all of which we are grateful—much that we need to know in the South.

So I say this: Here is our heart. Here is our hand. Welcome to the Promised Land.

PRESIDENT BERGMAN: The response to this very fine address of welcome will be given by N. S. Mayo, Highland Park, Ill. Dr. Mayo.

DR. MAYO: Mr. President, Congressman Chandler: On behalf of the American Veterinary Medical Association, we wish to thank you for your generous words of welcome and hospitality so characteristic of the Southland. We are pleased to meet in this beautiful and historic city, where DeSoto first saw the mighty river that has been made so famous by our beloved Mark Twain.

There is another reason why we are pleased to meet here, and that is that it was here an honored member of our association, a former president, the late Tait Butler, labored so long and so earnestly for the upbuilding of agriculture and the livestock industry in the South.

You have very clearly outlined the need of a greater livestock industry in the South. It has been authoritatively stated that no system of general agriculture has ever been maintained over a period of time without the use of livestock to keep up the fertility of the soil. You know, I am sure, what our profession has done

for the livestock industry of the South in the eradication of the cattle tick, in the control of anthrax, tuberculosis, and other animal diseases and I can assure you that in the future we are better prepared than ever in the past to continue that work.

We hope that in the very near future, the livestock industry of the South will be trebled. There is an old English rhyme that has more truth than poetry when it says: "A cow and a sow, a mare, ewe, and hen, bring financial salvation to men; and then, besides, if you have a good wife, there is nothing to hinder your enjoying life."

PRESIDENT BERGMAN: Thank you, Dr. Mayo.

One of the greatest assets of the American Veterinary Medical Association is the Women's Auxiliary. Mrs. C. H. Case, president, of Akron, Ohio, will bring greetings from that organization. Mrs. Case.

MRS. C. H. CASE: Mr. President, honored guests, ladies and gentlemen: Once upon a time, in a small town anywhere in the United States, a group of small boys were celebrating the Fourth of July. In gay costumes and with fife and drum, they marched down the village street. Trailing along behind them was a small brown hen, a pet of one of the boys. An on-looker said: "It is a fine parade, boys, but why the hen?" The leader replied, "Sir, she is the ladies' auxiliary."

Now, from the lady who keeps the home fires burning while the veterinarian does valuable service in a state or federal unit; from the lady who protects the veterinarian from the difficulties of the world, which are frequently so much with us, when he is trying to complete an important experiment in a research laboratory; from the lady who never, never quarrels with her bread and butter and who has learned the magic of keeping mashed potatoes and steak palatable for one, two, three, or even four hours while the veterinarian in private practice makes the emergency call; and from the lady who graciously stands by the member of the college faculty at the reception on the college campus or on another occasion not quite so glamorous, still stands by—from these ladies and from many, many more who are interested to do their bit to advance the cause of veterinary medicine throughout the length and the breadth of the land, it is my happy privilege to bring greetings to you assembled here in this beautiful City of Memphis for the 76th annual meeting of the American Veterinary Medical Association.

PRESIDENT BERGMAN: Now, we shall have the address of the president.

... President Bergman read his prepared address. [See page 395.]

I shall now turn the meeting over to Chairman Jakeman of the Executive Board.

CHAIRMAN JAKEMAN: Mr. President, honored guests, ladies and gentlemen: It is a great privilege and honor for me to present, at this time, the president's key and the accompanying scroll.

President Bergman, the presidency of the American Veterinary Medical Association represents the highest office to which a veterinarian may be elected in his profession. It is, there-

fore, a great distinction and honor to hold this office. On the other hand, a tremendous amount of responsibility, personal sacrifice, and intensive travel have become counterparts of the honor. You were unanimously chosen as president-elect because of the high esteem in which you are held by your colleagues, not only as a scientist and educator, but because of your keen and active interest in Association affairs and the welfare and progress of veterinary medicine.

During your terms as president-elect and president, your duties have been unusually heavy. In addition to making important contacts, attending and speaking at various meetings, and carrying out the routine duties of your office, you have for two years been a member of the Committee on Reorganization, and this responsibility has added materially to your labors. You are to be congratulated upon the very efficient manner in which you have filled and are filling the office of president of this great organization.

It is with pleasure and honor that I now present to you the president's gold key and the accompanying scroll, which, I trust, will ever remind you of an appreciative American Veterinary Medical Association for the very efficient services you have rendered.

Chairman Jakeman presented the key and scroll to President Bergman.

PRESIDENT BERGMAN: Thank you, Mr. Chairman, and may I say that these tokens of service and appreciation will always remain among my most prized possessions.

CHAIRMAN JAKEMAN: Before presenting the president's key to President-Elect Way, I should like to offer a word of explanation about this ceremony. Many of you will recall that at the meeting in New York City, the past year, keys were presented to past presidents, the keys bearing the words, "Past President." It has been decided that it would be much more fitting to have the key bear the word "President," and be the insignie of the president's office during his term of service. The following year, the president will receive his scroll for distinguished services rendered to the Association.

I should like at this time for Dr. Way to step forward, please.

Dr. Way, as president-elect, I am particularly privileged and honored in presenting to you this key, the president's gold key, which will be the insignie of your office as president. I trust that it may prove a key to a very successful term of office after your installation during this convention.

PRESIDENT-ELECT CASSIUS WAY: Mr. Chairman, ladies and gentlemen: I deeply appreciate the great honor you have bestowed upon me. I shall need much help and assistance. I earnestly solicit your cooperation, your advice, and your constructive criticism. The work incident to guiding the destiny of this great organization is too much for one individual. The executive branch of the Association fully appreciates the confidence which you have shown in your present officers by creating a workable, permanent governing board to supervise and administer the affairs of the Association.

I congratulate the local Committee on Arrangements on the fine set-up they have made

for the comfort and entertainment of the guests. The true test of the perfect host is to make the guests feel at home. They have done more than this, and perhaps, looking into the future—far into the future and possibly into the great unknown—I am reminded that possibly some day we may be glad to return to Memphis, reincarnated, perhaps, as members of the American Veterinary Medical Association.

In this connection, I am reminded of the story of the fine Irish couple who thoroughly believed in reincarnation. They agreed that after either one had passed, they would endeavor to communicate with each other. Pat was the first one of them to pass on. Not long after his demise, Bridget attempted to communicate with him. She went into the solitude of her chamber, sat on the edge of the bed, and soon called out into the darkness, "Pat, Pat, are you there?" Lo! The answer came back, "Yes, Bridget, I am here." Bridget said, "Pat, how are things up there?" "Oh," he said, "Bridget, they are fine. The trees are marvelous, the grass is green, and they have the finest cows that you ever saw." "But," said Bridget, "Pat, they do not have cows in Heaven." "I am not in Heaven," said Pat, "I am a bull in the certified dairy in Memphis, Tenn."

During the past six or seven months, you have undoubtedly been mindful of a publicity campaign to stimulate interest among the members and an interest and desire to participate in this great meeting. The results seem to be reflected in the rather unprecedented registration at 10:00 this morning, before the session opened, of well over 1,000 members, ladies, and visitors.

The cooperation received from every agency, the many journals, the state and local associations, the commercial concerns, and the individual members is much appreciated. What publicity has done in this connection, it can also do for the rank and file of the profession and livestock owners. For a long time I have been convinced that the more the livestock owners know about good veterinary service, the more they will demand it, and when they demand it, they will get it.

This association can publicize the quack, the charlatan, and the illegal and unethical individual out of business. One of our esteemed members has become a member of the legislative house in Washington. When he was campaigning through his district, an influential politician escorted him. Everywhere he went, he was introduced, and the person to whom he was introduced would say, "Yes, I have heard about you." The next place he went the person to whom he was introduced said, "Yes, I have heard about you." He resolved to find out what they had heard. On the next occasion, the man to whom he was introduced said, "Yes, I have heard about you." The office-seeker inquired, "What have you heard?" The man said, "I have heard you are a horse doctor."

We pride ourselves on possibly being the greatest organization of scientific veterinarians in the world. Let us pull ourselves further out of the horse-doctor stage. Let us pull our light out from under the bushel and tell the owners of live stock about better veterinary service.

and more about the accomplishments of our profession.

It will cost a little money, but the returns will be manifold. It is up to you. It is just like better veterinary service—if you demand it, you can have it.

We are all deeply indebted to the great reconstruction firm of veterinary engineers, Jack Brumberg, Inc., for the great work they have done since the Omaha meeting. You little realize the long hours they have spent, the financial and personal sacrifices they have made, to build a new foundation for a bigger and better A.V.M.A. To those who follow, they have set a hard pace.

As the zero hour rapidly approaches, I again solicit your help, your coöperation and your constructive criticism. I am sure I shall have it.

I thank you.

CHAIRMAN JAKEMAN: Thank you, Dr. Way.

Before presenting the Twelfth International Veterinary Congress prize, I wish to make a brief explanation of the existing regulations governing the Committee's selection of candidates for consideration.

Chairman Jakeman continued, reading the explanation of the regulations and the citation.

Presentation of the A.V.M.A. Award of the Twelfth International Veterinary Congress Prize

BEFORE PRESENTING the Twelfth International Veterinary Congress prize, I wish to make a brief explanation of the existing regulations governing the committee's selection of candidates for consideration. For several years this award was made to a member of the American Veterinary Medical Association who by his achievements in research during the immediate preceding year rendered an outstanding service to veterinary science. During the past year it was decided that this award should be made in recognition of distinguished achievements not necessarily confined to any definite period.

Although there are a number of distinguished veterinarians who grace our membership roll, the task of selecting a recipient for the award this year became an easy one with the change in regulations governing the selection. The person who is about to receive the award has distinguished himself not only in the United States but also in foreign countries. In fact, the winner was one of two candidates for the Budapest prize and his name was proposed by President Flückiger of the Thirteenth International Veterinary Congress held at Zurich. He has been signally honored by foreign countries as well as by many organizations in the United States. Because of the many outstanding qualifications which he possesses, his distinguished service as a scientist, writer, public speaker and as an executive who has directed and successfully completed projects of world-wide benefit and recognition, we feel sure that the selection will meet with unanimous approval.

It also seems particularly fitting that the

recipient of the Twelfth International Veterinary Congress prize should be the one who, as president of the Twelfth Congress, contributed in a very large measure to its success and, incidentally, was responsible for establishing a fund which made possible this annual award. It might seem to some that a delay has been made in conferring this A.V.M.A. honor upon a man who has received so many honors from other organizations in America and foreign countries. The explanation of the regulations which formerly prevailed will perhaps clarify this.

There can be no doubt at this time as to the man who has been selected to receive the reward this year. He is John R. Mohler, president of the Twelfth International Veterinary Congress and, for the past 22 years, chief of the Bureau of Animal Industry, U. S. Department of Agriculture. Dr. Mohler, will you please come forward?

CITATION

John R. Mohler was born in Philadelphia, Pa., on May 9, 1875. He married Clara M. Clark in 1897. After graduating from Temple University in 1893, he attended the School of Veterinary Medicine, University of Pennsylvania, and was graduated from the latter in 1897. December 1, 1901, he was appointed chief of the pathological division, U. S. bureau of animal industry and, on December 11, 1917, he was made chief of this bureau.

Following his illustrious predecessors, Delwin E. Salmon and A. D. Melvin, Dr. Mohler by his wide range of distinguished services and his direction of numerous projects has brought honor and credit to the veterinary profession at large. As a result of his exceptional executive ability and a background of scientific attainments the Bureau of Animal Industry, U. S. Department of Agriculture, is recognized at home and abroad as the greatest organization in the world engaged in the prevention of livestock losses and the protection of the public. Too little is known of the achievements of this great bureau of which the veterinary profession is so proud.

To complete a record of Dr. Mohler's contributions to veterinary science would necessitate a listing of the activities of the bureau of animal industry since he became chief in 1917. To mention a few outstanding accomplishments, we might refer to Dorset's discovery of hog-cholera vaccination, the eradication of foot-and-mouth disease, important discoveries in parasitology, the practical eradication of Texas fever, the prevention of foreign plagues and the eradication of bovine tuberculosis. These are indicative of great scientific achievements and also of exceptional leadership in bringing them to a successful completion. An accomplishment of which the American Veterinary Medical Association is particularly proud is that of eradicating bovine tuberculosis. With 47 states already in the modified accredited area and only eight counties in the one remaining state still to reach the goal, the success of this enterprise is now assured. It is indeed a brilliant victory for the veterinary profession of the United States and for the capable leader who directed the

campaign. Many obstacles were encountered and discouragements prevailed. Through it all Dr. Mohler never wavered, nor did he seek to conceal or minimize the difficulties. His keen business ability, sincerity and professional experience enabled him to obtain millions of dollars to carry out this work in spite of opposition, lack of interest and an economy complex which prevailed among federal and state officials in the early days of the tuberculosis-eradication campaign.

This same evidence of business acumen enabled the A.V.M.A. to establish an exhibit at the New York World's Fair. Had it not been for the work and solicitations of Dr. Mohler, this wonderful publicity for the veterinary profession would not have been possible.

Besides making frequent contributions to veterinary journals and preparing reports and other official documents for the U. S. Department of Agriculture, Dr. Mohler is associate editor of the 1938 edition of "Special Pathology and Therapeutics of the Diseases of Domestic Animals," and also of the recent addition of Webster's Unabridged Dictionary.

In 1937, the secretary of agriculture appointed Dr. Mohler as chairman of a committee to coordinate poultry activities of the U. S. Department of Agriculture. This committee coordinated federal poultry research, regulatory and informative work relating to poultry in twelve bureaus and other units of the Department. It was a very important task and was well carried out.

Dr. Mohler has been instrumental in establishing two federal regional laboratories involving animal disease research and he has general direction of the scientific work of these laboratories.

The brief mention of the foregoing items would be incomplete without reference to his regular official duties as chief of the bureau. In this capacity he plans and directs the work of approximately 7,000 persons largely engaged in such duties as federal meat inspection, control and eradication of disease, quarantine activities, research and related veterinary services. In his official capacity he makes frequent personal contacts with high officials of foreign governments, public health service, army and navy, and other professions as well as with industrial executives. These contacts have done much to enhance the standing of the veterinary profession in the eyes of public officials and the laity at large.

CHAIRMAN JAKEMAN: Dr. Mohler, in presenting to you this A.V.M.A. award of the Twelfth International Veterinary Congress prize, I do so with a keen sense of pride and honor. The American Veterinary Medical Association and the entire veterinary profession is indeed proud of you; it is likewise indebted to you. As an alumnus of your alma mater, I feel it a particular privilege to have the honor of making this presentation.

JOHN R. MOHLER: President Bergman, Dr. Jakeman, members and guests of the American Veterinary Medical Association: After the re-

marks you have just heard, I find difficulty in expressing my appreciation for the honor bestowed. To be so recognized by any association engaged in useful service would be a great honor. It is still greater when coming from a large and strong professional organization, such as the American Veterinary Medical Association, whose lofty standards and attainments are so well known.

Dr. Jakeman has spoken with some emphasis of the tuberculosis-eradication project. If the honor which you have bestowed is largely in recognition, as I interpret it to be, of the results obtained in tuberculosis work, then every veterinarian in this audience is entitled to a share in Dr. Jakeman's generous tribute. The real success of the vast tuberculosis-eradication enterprise has been due to the fact that it is a worthy cause. It is a cause in which public spirited volunteers, as well as regular fighters, kept coming forward constantly. Yes, there were some misgivings, especially in the early days of the work, but they were honest doubts, for the most part, honestly and courageously expressed.

In recent years, public opinion carried the work forward with irresistible force. Success has been said to be merely the result of cooperating with the inevitable. Thus, in a large degree, my part in the work has been no more important or influential than that of many others who actually were much more closely associated with the field activities. Those who were more often on the firing line, so to speak, were Dr. Wight and his staff, together with the inspectors in charge, state veterinarians and their forces, and the veterinary practitioners. In our battles against disease, let us remember that powerful aid frequently comes from the rank and file of our profession. Laymen also play an important part. For instance, in the tuberculosis campaign, every taxpayer contributed in some degree to the result.

I am proud that the first nation to conquer bovine tuberculosis to the point of practical eradication is a democracy, the United States. The project was undertaken only after full discussion, in which any voice was welcome to be heard. Authorization for the work was granted by the United States Congress and state legislatures, all representing the will of the people. When property in the form of diseased animals was condemned, this action also represented the will of the people. In the vast majority of cases, the individual cattle owner also approved the action taken.

Dr. Jakeman has referred to the fact that large expenditures were approved for the tuberculosis work at a time when economy was the national watchword. It is true that General Lord, when director of the budget, was highly conservative in financial matters, and the nature of his position and its responsibilities often required him to say "no" in the interests of public welfare. But he was also very considerate and human. At the time of one of my visits to his office, he had been working overtime and the cleaning force was busy in the building. When the tuberculosis item was under consideration, a charwoman was working near his desk. At first, the general seemed

disposed to feel that the item for tuberculosis should be reduced, along with other expenditures, in order to effect the necessary economies.

I confess that the prospects for the item were not very bright and, as a soldier in the ranks, I could not dictate expenditures in the face of high executive orders for economy. But, early the next morning and before regular office hours, General Lord sent for me and indicated his disposal to approve not only the amount received the previous year, but to increase it by \$1,093,000, as I had recommended.

"I have been thinking it over," he told me in substance, "and I could not help but think of that charwoman who was cleaning my office. I happen to know," he continued, "that she has six boys. She is supporting them on a meager wage. If any of those boys were to contract tuberculosis from the milk of a diseased cow, I could never forgive myself. And furthermore, what value would they be to our country in case of war?"

That was substantially the conversation, after which he went into detailed consideration of the various items, and then gave his full approval. This is only a minor incident, to be sure, but it illustrates the value and power of human relationship and also a well informed public opinion, which is merely the composite of individual opinions.

The award which you have so generously bestowed happens to be in my name, but, in accepting it, I do so in the name of all those veterinarians and others who have helped to further the objectives of this association.

My thanks to you, Mr. Chairman, and to the other members of your committee.

... President Bergman assumed the chair. . .

PRESIDENT BERGMAN: Dr. Merillat would like to make a few remarks at this time.

... Executive Secretary L. A. Merillat made some announcements. . .

PRESIDENT BERGMAN: John H. Gillmann, chairman of the local Committee on Arrangements, has some announcements to make at this time.

... Announcements. . .

PRESIDENT BERGMAN: Dr. Eichhorn has a matter he would like to discuss at this time.

A. EICHHORN: Mr. President, ladies and gentlemen: We have honored various members of our profession from the United States. I have before me a message I would like you to approve to be sent to one of the greatest veterinary scientists, organizers, and educators of the world. I refer to Professor Ostertag, who, about two months ago, celebrated his 75th birthday and received on the occasion many congratulatory messages from all parts of the world, from veterinary associations, institutions, and organizations.

The veterinary profession of this country is meeting for the first time since that memorable day, and I think that it would be fitting to send Professor Ostertag a congratulatory message on this occasion.

With this in view, Mr. President, I move that we send Professor Ostertag the following message:

The American Veterinary Medical Association, now in session at Memphis, Tennessee, unani-

mously passed a resolution to extend to you felicitations and best wishes on the occasion of your 75th birthday, in recognition of your great accomplishment for the advancement of veterinary science.

I move that the Association approve the sending of this cable to Professor Ostertag.

DR. MAYO: I second the motion, Mr. President.

PRESIDENT BERGMAN: You have heard the motion. All in favor signify by saying "aye"; opposed, "no." The motion is carried unanimously and it is so ordered.

A very interesting program that will occupy the full afternoon has been planned, so we shall try to start the general session this afternoon on time.

We stand adjourned until 1:30 this afternoon.

... The meeting adjourned at 12:40. . .

Tuesday Afternoon Session

August 29, 1939

The meeting convened at 1:30 p. m., President Bergman presiding.

PRESIDENT BERGMAN: The meeting will please come to order.

The first paper of this very interesting afternoon program is entitled, "Equine Encephalomyelitis," by H. W. Schoening, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C. He needs no introduction, of course, as you are all acquainted with Dr. Schoening.

... Dr. Schoening read his prepared address. [Published September, 1939, pp. 268-272, without discussion.]

PRESIDENT BERGMAN: We shall now proceed with the next subject, "A Mouse Test for Measuring the Immunizing Potency of Canine Antirabies Vaccines," by L. T. Webster, Rockefeller Institute for Medical Research, New York, N. Y. Dr. Webster.

Dr. Webster has some slides that he wishes to show. Those of you who are pretty well back will have to come forward, if you wish to see them.

DR. WEBSTER: Mr. Chairman, it is a great pleasure to be here at the invitation of the American Veterinary Medical Association and to have this opportunity to submit to you some data pertaining to canine antirabies vaccination.

By way of introduction, let me hurry through a few basic points with which, doubtless, you are all familiar, pertaining to rabies infection, immunization, and vaccination.

... Dr. Webster continued, reading his prepared address. [To be published with discussion.]

PRESIDENT BERGMAN: We are indeed very grateful to Dr. Webster for this very fine paper.

We shall now proceed with the next paper, "Significance of Veterinary Medicine," by D. M. Campbell, editor of *Veterinary Medicine*, Chicago, Ill.

D. M. CAMPBELL: I was not under any delusions about the difficulty there might be in

discussing a subject of this extent in 15 minutes but, nevertheless, I finally got to the point where I could not put off writing the paper any longer, so last week I began. I was considerably surprised when I found that I could touch the subject only here and there and still keep within reasonable limits, for I could scarcely connect the points.

... Dr. Campbell continued, reading his prepared paper. [To be published.]

PRESIDENT BERGMAN: Is there any comment on Dr. Campbell's paper? If not, we shall now proceed with the nomination of officers to be elected at this meeting. These officers are: president-elect, five vice-presidents, and treasurer. We shall now hear nominations for president elect.

M. JACOB: Mr. Chairman and gentlemen: I have been a member of this association for approximately 38 years. During this entire time I have never had the privilege or the opportunity to nominate the leader for this great association. When the opportunity came to me today, I could not resist the temptation.

The man whom I have the privilege to nominate as president-elect is known to all of you. He needs no flowery introduction and, I can assure you, what I may lack in oratory and in gesture in presenting his name is offset by the profound admiration and respect which I hold for him.

This man is known to all of you. He is known to every practitioner in the entire United States, Canada, and in our possessions. He is known to every regulatory man; he is known to practically all of the livestock people throughout the United States. During my own time I have had considerable contact with all of these groups, and I have yet to hear the first disparaging statement to be made about this man.

He rose to his present position from a state of more or less obscurity, as far as his official capacity was concerned, to what, I believe, is one of the most important positions, from an administrative standpoint, in the direction of livestock sanitary control work in the United States and throughout the entire world.

He is a modest man. He is a friend to everybody and, even though he is a modest individual, he does not fail to assert himself when the time comes. I have had considerable contact with him socially and officially, and in each and every instance he has conducted himself in a sympathetic but firm and constructive manner.

I do not know of any man who typifies what

is considered ideal in the membership of the American veterinary profession more than he, and it is a great pleasure indeed for me to be privileged at this time to present in nomination as candidate for the office of president-elect, the chief of the tuberculosis eradication division of the U. S. bureau of animal industry, A. E. Wight of Washington, D. C.

DR. WISNICKY: Mr. Chairman and members of the American Veterinary Medical Association: I am experiencing a feeling of personal pleasure in seconding the nomination of A. E. Wight for the position of president-elect of our organization. As Dr. Jacob has said, he is a man who has done a great deal for the field of veterinary medicine. He has assumed burdens which only few of us would be capable of undertaking. Not only has he assumed those burdens, but he has fulfilled in the best possible way the obligations of a very important position.

Dr. Wight's accomplishments in the field of tuberculosis control and in the field of Bang's disease control will stand as a monument for posterity. With the passing of the late Dr. Kiernan, Dr. Mohler must have had a very difficult problem in filling a position that was so ably carried on by a very courageous man, and I feel that in the selection of A. E. Wight he showed expert judgment.

It has been said that an administrator who has a big job ahead of him can succeed only in the proportion that he is able to select competent men to assist him, and I think that in choosing his chief aids, he has selected a very capable man in Dr. Wight.

I think that if the spirit of Dr. Kiernan could be hovering over this room today, and if before the spirit of Dr. Kiernan could pass in review the accomplishments and the great work which Dr. Wight has contributed to the field of veterinary medicine, he would nod his head and say the job was well done.

For a number of years I have had the opportunity of working in close cooperation with Dr. Wight, and during that time I have always felt that he was administering his position in a very capable way. More than that, after years of hard work together, we have developed a splendid friendship. When one can say, after he has worked with a person for a long period of time, that he feels that he is a true friend, such is a tribute that can not be exceeded.

Not only does Dr. Wight merit the support and the honor this position will give him, but I believe that he can very capably carry on the duties of that great office.

DR. IVENS: I move you the nominations close.

... The motion was regularly seconded.

PRESIDENT BERGMAN: It has been moved and seconded that the nominations be closed, the by-laws be suspended, and that the secretary be instructed to cast the unanimous ballot of the Association for Dr. Wight's election as president-elect. All in favor of the motion, signify by saying, "aye"; opposed, "no." The motion is carried.

DR. INGMAN: I hereby cast the unanimous ballot on behalf of this association for Dr. Wight as president-elect of this association.



A. E. Wight

PRESIDENT BERGMAN: I declare Dr. Wight elected.

... Dr. Wight came to the platform. . .

DR. WIGHT: Mr. President, ladies and gentlemen: I have been so overcome that I can not really say anything except "thank you," each and all of you, for the great honor you have bestowed upon me. I especially want to mention the honor that you have displayed toward the Bureau of Animal Industry of the U. S. Department of Agriculture, of which I have been a member for many years. There is nothing more to say. I do not remember what goes on at this particular time. If there are any questions that are to be asked, I will be glad to answer them.

PRESIDENT BERGMAN: We shall proceed with the nominations for five vice-presidents.

R. S. MacKELLAR (New York City): I nominate W. H. Ivens of Philadelphia as first vice-president.

DR. MOORE (Louisiana): I nominate Matthew E. Gleason of San Antonio, Texas.

J. C. FLYNN (Kansas City, Mo.): I should like to place in nomination J. C. Wright of Atlanta, Ga.

DR. FERGUSON (Wisconsin): I wish to nominate George A. Gettelman of Hartford, Wis.

DR. CAMERON: I should like to nominate Dr. Potter, president of the Ontario Veterinary Association.*

DR. FLYNN: I move that the nominations be closed, the rules suspended, and the secretary be instructed to cast the unanimous vote of this body for the five as they appear here.

... The motion was regularly seconded. . .

PRESIDENT BERGMAN: It has been moved and seconded that the nominations close, the by-laws be suspended, and the secretary cast the unanimous ballot of the Association for these five men as vice-presidents in the order named. All those in favor, signify by saying, "aye"; opposed, "no." The motion is carried.

DR. INGMAND: I hereby cast the unanimous ballot of this association for Dr. Ivens as first vice-president; Dr. Gleason as second vice-president; Dr. Wright as third vice-president; Dr. Gettelman as fourth vice-president; and Dr. Potter of Ontario as fifth vice-president.

PRESIDENT BERGMAN: I hereby declare these men duly elected.

Nominations for treasurer will now be received.

DR. IVENS: Mr. President, it gives me a great deal of pleasure indeed to place in nomination the name of a man who, as you know, is a very busy man, but one who has fulfilled the duties of treasurer of the A.V.M.A. so well for so many years—M. Jacob of Knoxville, Tenn.

DR. AXBY: Mr. President, the gentleman just nominated never having been opposed, and no one ever anticipating his opposition, it is a pleasure to me to move that the nominations be closed, and that the secretary be instructed to cast the unanimous vote of this association for Dr. Jacob.

... The motion was regularly seconded. . .

PRESIDENT BERGMAN: It has been moved and seconded that the nominations close, the by-laws

be suspended, and the secretary be instructed to cast the unanimous ballot of the Association for Dr. Jacob as treasurer. All in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

DR. INGMAND: I hereby cast the unanimous ballot of this association for M. Jacob of Knoxville as treasurer.

PRESIDENT BERGMAN: I declare Dr. Jacob duly elected. These officers will be inducted into office at the general session following the meeting of the House of Representatives on Thursday evening.

... Announcements. . .

PRESIDENT BERGMAN: Is there any other business to come before the Association at this time? If not, we stand adjourned.

... The meeting adjourned at 4:35 p. m. . .

SECTION MEETINGS

Section on General Practice August 30, 1939

THE OPENING SESSION of the Section on General Practice convened at 9:15 a. m., James Farquharson, chairman of the Section, presiding.

CHAIRMAN FARQUHARSON: Gentlemen, the meeting will please come to order.

We are a few minutes late, but I think that we shall be able to catch up with our schedule if we adhere strictly to our papers and watch our time schedule. The report of the chairman of this section will be rather short, so I am certain that at the conclusion of this report we shall be back on our schedule.

Again, I want to request that you adhere strictly to the time allotted to you, for we have a rather full program and we do not want to encroach upon each other's time, and then we will have as much time as possible for discussion.

I shall now read the "Chairman's Address."

... Chairman Farquharson read his prepared address.

Chairman's Address

AS CHAIRMAN of the Section on General Practice, I particularly want to thank the secretary of this section, Dr. Oglesby, for his untiring service. No one realizes more than I the tremendous amount of effort and time he has so generously and ably given in order to plan the proceedings of this section. Furthermore, I want to thank the speakers on the program for their time and their fine spirit of coöperation.

In molding this program, we have deviated somewhat from the plan of former years, purposely omitting such universally expounded subjects as Bang's disease, mastitis, and equine encephalomyelitis. These subjects have been so generally and exhaustively discussed in every branch of veterinary medicine that a very definite individual policy for their control and treatment has been established in the mind of the general practitioner. Further discussion of these subjects in which no new or startling

*H. S. MacDonald of Toronto, Ont., later replaced Dr. Potter. See page 449.

progress has been made only lends itself to futile argument.

Since the Section on General Practice was originally intended to impart working information to the men engaged in the actual practice of veterinary medicine, we have endeavored to make the program conform to this idea. The general practitioner of today, more than ever, can not afford to ignore the new developments and scientific research in other departments of veterinary science. He must possess a general knowledge of every collateral branch of the profession, yet his predominating interest should be the art of veterinary science. Therefore, we are presenting this program with the aid of men who have a rich background in the science, yet are highly successful in performance of the art in their respective fields.

We have attempted to give a diversity of subjects pertaining to both work and meat-producing animals. While the subjects selected are not new, it is our hope that new phases of familiar topics may be discussed in this meeting to the advantage of all.

W. T. OGLESBY (University, La.): Gentlement, the next item of business is the secretary's report. Dr. Farquharson, the secretary does not have a prepared report but there are one or two things that I wish to mention.

First, I want to express my thanks to Dr. Farquharson for the kind remarks he made relative to my efforts in attempting to build this program. I want to say that he has been the kind of chairman that a chairman should be. He has interpreted well what was implied in many suggestions, and he has been on the job to direct every detail.

I also wish to thank all of the men who so graciously accepted the assignments given them and who are taking part in the discussion of this meeting today.

As Dr. Farquharson suggested, we have attempted to build this program around the practitioner. In past years this section has been dominated not by practitioners but rather by research or commercial men and others not actually classified as practitioners. If you will glance over the program for this year, you will see that practitioners occupy the major rôles, and that is the way, I think, it should be. I should like to mention that I solicited Dr. Smith, and he accepted, but you will find that he has been assigned to the general session of tomorrow morning.

Dr. Bergman suggested early in the year that the talks be held down to 20 or 22 minutes. I so informed all of the men whom I asked to appear on this program and they have graciously consented to hold their speeches to that allotment.

That concludes your secretary's report, and I turn the meeting back to our chairman.

CHAIRMAN FARQUHARSON: We are going to insist on the observance of the time allotted to each man and, at the end of 20 minutes, I shall give a signal that the time is up. You may continue talking for a minute or two after that, and then stop to permit a ten-minute discussion of the paper. You must remember that if you talk beyond that minute or two, you are

precluding the opportunity for valuable discussion, which is often the most interesting part of the meeting.

The first paper on the program is "Lameness Incident to Training and Racing," by J. E. Peters of San Mateo, Calif. Dr. Peters is recognized as a leader along this line. Dr. Peters. . . . Dr. Peters read his prepared paper. [To be published, with discussion.]

CHAIRMAN FARQUHARSON: The next paper is "Diseases Incident to the Fattening of Lambs" and will be delivered by N. J. Miller of Eaton, Colo. Dr. Miller lives in the largest lamb-feeding district in the world and he has had a lot of experience with these diseases in the fattening of lambs.

. . . Dr. Miller read his prepared paper. [To be published, with discussion.]

CHAIRMAN FARQUHARSON: We shall go on to the next paper, which is "Anesthetics Applicable to Large Animals," by George R. Fowler, division of veterinary medicine, department of surgery, Iowa State College, Ames, Iowa. Dr. Fowler.

. . . Dr. Fowler read his prepared paper. [To be published, with discussion.]

CHAIRMAN FARQUHARSON: The next paper is, "So-Called Hemorrhagic Septicemia," by W. A. Aitken, Merrill, Iowa.

. . . Dr. Aitken read his prepared manuscript. [To be published, with discussion.]

CHAIRMAN FARQUHARSON: We shall proceed with the next paper, "Enteritis as a Swine Disease Problem," by F. M. Wilson, Mechanicsville, Iowa.

. . . Dr. Wilson presented his prepared manuscript. [To be published.]

CHAIRMAN FARQUHARSON: It is now past 12:00, and I must close the discussion. We stand adjourned.

. . . The meeting adjourned at 12:10. . .

Wednesday Afternoon Session

CHAIRMAN FARQUHARSON: The first paper of this session will be "Equine Infectious Anemia (Swamp Fever)," by W. L. Gates, Clarksdale, Miss.

. . . Dr. Gates read his prepared paper. [To be published with discussion.]

We shall now proceed to the next paper, "The Use of Sulfanilamide in General Practice," by J. J. Arnold, New Castle, Ind.

CHAIRMAN FARQUHARSON: The next paper is "Mule Practice in the Sugar Cane Belt," by J. A. Goodwin of New Iberia, La.

. . . Dr. Goodwin presented his prepared address. [To be published with discussion.]

CHAIRMAN FARQUHARSON: We shall pass on to the next paper, which is, "Pneumonia in the Horse," by D. L. Proctor, Lexington, Ky.

. . . Dr. Proctor presented his prepared paper. [To be published with discussion.]

The next paper is "Intravenous Medication," by W. R. Krill, Veterinary Clinic, Ohio State University, Columbus, Ohio.

. . . Dr. Krill presented his prepared paper. [To be published with discussion.]

The next paper is "Diseases of New-Born Calves," by Fred Miller, Whitewater, Wis.

... Dr. Miller presented his prepared address. [To be published.]

Owing to the lateness of the hour, we shall have to pass on to the next paper, "Diseases in Feeder Cattle," by W. S. O'Neal, St. Charles, Mo.

... Dr. O'Neal presented his prepared paper. [To be published with discussion.]

The next paper is "Controlling Diseases and Parasites in Garbage-Fed Hogs," by P. C. Guysselman, San Bernardino, Calif.

... Dr. Guysselman presented his prepared address. [To be published.]

I wish that we had time to discuss this paper, but we do not.

Gentlemen, before we leave there are some business matters to which we must attend.

The first matter is that of settling the chairmanship for our next convention. I shall ask Dr. Oglesby to designate the chairman and the secretary for the ensuing year and they will be appointed by Dr. Webb. We have done that and have unanimously approved the two men.

DR. OGLESBY: We received a letter today from Dr. Way, asking for a vote, in other words, giving more specific governing power to this section, as he feels that there should be a nomination and a vote on these two men.

The men I would nominate would be Drs. Aitken and Krill.

... The nomination was seconded and they were unanimously approved; the second to the nomination was made by Dr. Ferguson.

CHAIRMAN FARQUHARSON: I move that we cast a unanimous ballot for these men.

... The motion was seconded and unanimously adopted.

DR. FERGUSON: Gentlemen, I move that we give the present administration a rising vote of thanks for the fine work they have done this year.

... The motion was seconded, and the vote given.

CHAIRMAN FARQUHARSON: Thank you. We greatly appreciate that expression. Had it not been for the cooperation given us by each and every one of you, however, this would not have been possible.

Gentlemen, it is now past 5:00, and I now declare this meeting adjourned.

... The meeting adjourned at 5:07.

Board for consideration. After a number of months had passed, permission was given the officers of the Section to put the changes embodied in the proposals into operation. In the meantime, the officers of the Section, not wishing to delay the building of the program pending approval or rejection of the proposals by the Executive Board, had proceeded largely in the traditional way to construct a program for this meeting. When permission was finally received to put the new proposals into operation, our plans had been developed to a point where it was virtually impossible to make any extensive use of the new procedures for this meeting. The majority of the points covered in the proposals have, therefore, not yet been tried out.

I wish to emphasize this, because the opinion appears to be held by some that the Section is now operating under the new procedure. Abstracts of papers were obtained, however, and through the cooperation of the offices in Chicago, these were prepared for distribution to the Section at this meeting. This is a new procedure for the Section, and Dr. Thorp, our secretary, and the central office deserve our thanks for making these abstracts available to us. I sincerely hope that the officers of the Section for the coming year will give the proposals a trial where at all possible, so that their feasibility may be determined.

I wish, in closing, to state that the plans were drawn up specifically for the Section on Research and that it is unlikely that they would fill in detail the needs of the other sections. A method of program-building and procedure suitable for one section is not necessarily suitable for all of the other sections.

Dr. Thorp, have you any remarks to make?

FRANK THORP, JR.: I wish to take this opportunity to thank all members of the program for their splendid cooperation in furnishing the abstracts. Also, we appreciate very much that we have more than the allotted six papers for presentation to the Section.

In dividing the time for this program we tried to adhere to the constitutional limit, that is, 20 minutes for presentation, with approximately five minutes for discussion. We find that since we have seven papers in each session instead of six, it will be necessary to cut the time of discussion down to approximately four minutes. If we find that we have time to spare, we shall allow more time for discussion. Hence, you may have your constitutional 20 minutes for presentation, with approximately four minutes for discussion. The abstracts will be passed out just before the presentation of each paper.

CHAIRMAN DUKES: The first paper is entitled "Lesions of Gossypol Poisoning in Dogs Fed Cottonseed Meal," by John L. West, animal pathologist, Alabama Polytechnic Institute, Auburn, Ala. Dr. West.

... Dr. West presented his prepared address. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper is "Streptococcal Infections in Dogs. II. Pathogenicity for Pups, Abscesses, Tonsillitis and Acid Milk," by H. J. Stafseth, professor of pathogenic bacteriology, Michigan State College, East Lansing, Mich.

Section on Research

August 30, 1939

THE OPENING SESSION of the Section on Research convened at 9:15 a. m., H. H. Dukes, chairman of the Section, presiding.

CHAIRMAN DUKES: The Section will please come to order. The program for this morning is fairly full, and I think it is wise to give as much time as possible to the presentation and the discussion of the scientific papers. I have, therefore, not prepared any formal address.

I want to say a few words, however, about the proposals calling for changes in the method of procedure in the Section, as adopted by the Section at the meeting in New York last year. These proposals were referred to the Executive

WARD GILTNER (East Lansing, Mich.): I have the paper. If it is permissible, and if it is wished, I shall read it.

CHAIRMAN DUKES: Please do.

... Dr. Giltner read Dr. Stafseth's prepared address. [To be published.]

CHAIRMAN DUKES: Would you care to have this paper thrown open for discussion, Doctor?

DR. GILTNER: Yes, but I will not discuss it.

CHAIRMAN DUKES: If there are any comments or remarks that anyone cares to make, the paper is now open for that purpose.

DR. GILTNER: I purposely avoided stating that I would not discuss it, hoping that there would be discussion and knowing that there are a great many people in the room competent to answer any question.

CHAIRMAN DUKES: If there is no discussion, we shall have the next paper, "Studies in Canine Coccidiosis," by F. X. Gassner, assistant professor of physiology, Colorado State College, Fort Collins, Colo.

... Dr. Gassner presented his prepared paper. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper, "A Systematic Survey of the Gastrointestinal Worm Parasitisms of Cattle," will be presented by D. W. Baker, assistant professor of parasitology, Cornell University, Ithaca, N. Y.

D. W. BAKER: The report this morning is not an exhaustive study of the data which we have collected. It is a rather short summary of this material. I felt that in 15 minutes it would be impossible to give the story as we found it. As Dr. Gassner said, it is almost impossible to give a historical survey of a study of this sort in the limited time, so we are omitting the review of the literature.

... Dr. Baker continued, reading his prepared report. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper is "The Susceptibility of Guinea Pigs to Equine Encephalomyelitis Virus Inoculated Through Various Routes," by Carl F. Schlotthauer, associate professor in veterinary medicine, The Mayo Foundation, Rochester, Minn.

DR. SCHLOTTHAUER: Mr. Chairman, members of the research section: The report that I am to give is not new to many of you, and still it may be new to some. In working with equine encephalomyelitis in a diagnostic way, I found great variance in the susceptibility of animals, or in the virulence of the material with which I was working, in dealing with field virus. Therefore, I undertook to do a standardized piece of work to see if the same variations would occur there.

... Dr. Schlotthauer continued, reading his prepared address. [To be published, with discussion.]

CHAIRMAN DUKES: Dr. Hewitt is not here this morning, and the next paper has been written by him. We have a copy of his paper, a part or all of which may be read near the close of the session this morning. We shall defer his paper, then, for later consideration.

The next presentation is "Induced Bloat in Dairy Cows," by R. W. Dougherty, assistant professor of veterinary medicine, Oregon State College, Corvallis, Ore.

... Dr. Dougherty read his prepared manu-

script and showed some moving pictures illustrating his work. [To be published, with discussion.]

CHAIRMAN DUKES: Since Dr. Hewitt is not here this morning, I am going to read the introduction and the summary of his paper.

... Chairman Dukes read Dr. Hewitt's prepared address, entitled "Influence of Various Ions on Intestinal Motility." [To be published.]

CHAIRMAN DUKES: We are going to have a bit of business to transact at the session this afternoon, and a good attendance would be desirable to make the business which will be transacted representative of the wishes of the Section. It will take only a few minutes for that.

We shall start promptly at 1:30. The Section is adjourned until that time.

... The meeting adjourned at 12:00.

Wednesday Afternoon Session

THE SECOND SESSION of the Section on Research convened at 1:40 p. m., Chairman Dukes presiding.

CHAIRMAN DUKES: The meeting will please come to order. The first paper is "A Study of Death Losses in New-Born Pigs," by L. P. Doyle, associate pathologist, Indiana Agricultural Experiment Station, Lafayette, Ind.

L. P. DOYLE: By way of introduction, I wish to say that for several years we have regarded the death losses in new-born pigs as an important problem. I am referring to those losses which occur during the first few days or first few hours after birth.

... Dr. Doyle continued, reading his prepared address. [To be published, with discussion.]

CHAIRMAN DUKES: As announced this morning, a brief order of business should come before the Section this afternoon and, to begin, I shall read this letter from Dr. Way, the president-elect, which will be somewhat explanatory.

To the chairman, Section on Research: It is the desire of the Executive branch of the A.V.M.A. to increase the autonomy granted the various sections in order that they may function more to the liking of the individual members. It is hoped that the constitution and by-laws may be changed before long to permit more freedom in the selection of the chairman and secretary of each section.

To this end, and in the spirit of cooperation, will you endeavor to secure for me by popular vote at a full meeting of your section the names of two men, either of whom the members of your section would like to have act as chairman at the next meeting, and two men, either of whom you would like to have act as secretary. The president will be glad to appoint the chairman and secretary for the 1940 meeting from your selections.

Now, we have a good attendance at this time, and I think it is appropriate to consider this item of business. Nominations for recommendation to Dr. Way for the chairmanship for the coming year are now in order and he asks that we nominate two men for this position. He will select one. Nominations for the chairmanship are now in order.

E. T. HALLMAN (East Lansing, Mich.): I

wish to place in nomination Dr. Dukes to succeed himself.

CHAIRMAN DUKES: That is very flattering. I have been chairman two years now, and I think the thing should pass on to someone else. There is an added reason why I would not be able to serve another year. I might forget the fact that I have been chairman for two years, and consent to serve, if it were not for the fact that I shall be on sabbatical leave from Cornell the second term of this scholastic year and would therefore be unable to take any considerable part in the preparation of the program. I do not feel, therefore, that I should be considered for the chairmanship for another year.

DR. HALLMAN: Because of the fact that you are going away, you prefer not to serve?

CHAIRMAN DUKES: That is right. I shall be away most of the summer; also, the second term and most of the summer. I wish to decline, then, because I prefer not to be elected.

DR. HALLMAN: In view of your statement I withdraw your nomination and nominate Dr. Thorp.

DR. KERNKAMP: I second the nomination.

H. J. METZGER (New Brunswick, N. J.): I nominate Herbert L. Gilman as chairman.

DR. BAKER: I should like to second that nomination. Although there was no discussion of Dr. Gilman's name, I might give a few reasons why the two of us here think that Dr. Gilman might well serve in this capacity.

Dr. Gilman has, as you know, been associated on the faculty at Cornell for the past 20 years. During that time he has been pretty much relieved of any teaching duties, so that he has been able to carry on extensive research work, and he reports every year on some project on which he has been working. I think that he is eminently fitted for the rôle of chairman of the Section.

CHAIRMAN DUKES: Are there any further nominations? I presume that we could have any number of nominations and then vote on two of them, perhaps selecting the two who obtain the highest votes.

DR. BRANDLY (Michigan): I wish to nominate Dr. Kernkamp.

DR. KERNKAMP: Mr. Chairman, Dr. Brandly: I, too, have served in this position for two years, and believe that there are many other men qualified. I therefore decline the nomination.

DR. MATHEWS: I nominate Hubert Schmidt of Texas.

DR. SCHMIDT: I should like to nominate Dr. Hallman.

DR. HALLMAN: For the same reason that was given by Dr. Kernkamp, I wish to decline the nomination. I have been chairman of this section at least twice and, I think, possibly three times. I served as chairman in California, and in Detroit, I believe. That is twice, that I remember, and I think maybe we ought to spread this around among others who are more active.

DR. SCHMIDT: I shall withdraw the nomination.

A. HENRY CRAIGE, JR. (Philadelphia, Pa.): I nominate E. L. Stubbs.

CHAIRMAN DUKES: Are there any further nominations? How shall we proceed to nominate the nominees? I believe that a closed ballot would probably be required.

DR. KERNKAMP: I suggest that the two receiving the highest votes would be chairman, and the other two secretary.

DR. BAKER: I object to that suggestion. I do not believe it is regular. When I consider a man as candidate for chairman, I prefer to think of him in that position only. Similarly, I should like to think of a secretary in terms of his qualifications for that particular duty. That is, I feel that we have two different positions here to fill. Thus far, we have nominated four men for the office of chairman, and I think that we should vote on these men to determine who might be chairman, and then have another election for the secretaryship.

CHAIRMAN DUKES: What is the pleasure of the group? Shall we take the high two of these? Shall we ballot first on the chairmanship and take the two who get the highest vote? Is that satisfactory? We are nominating now the two potential chairmen to Dr. Way, one of whom shall be selected as chairman. We vote for two at the same time. I shall ask Dr. Metzger and Dr. Gassner to act as tellers.

... Balloting, and counting of votes. . .

... The results of the election were as follows: Thorp 23, Gilman 17, Schmidt 12, Stubbs 7. . .

CHAIRMAN DUKES: You see the result of the ballot. Drs. Thorp and Gilman are nominated to Dr. Way, who will appoint one or the other, presumably. I do not know whether he feels bound to do it or not. His letter, however, would suggest that he will appoint one or the other of those as the chairman of the Section.

Now, nominations for the secretaryship are in order.

DR. BAKER: Would election in one capacity preclude one's opportunity for serving in the other.

CHAIRMAN DUKES: In my opinion, it would not. I think that if someone wants to nominate one of these men for the secretaryship, he is at liberty to do so. I do not know that I am called upon to make a ruling on that, but I see no reason why if a member wants to nominate one of these men for the secretaryship he should not feel free to do it. Is there any objection to that? These are suggestions to Dr. Way. Nominations are now in order.

DR. BAKER: Mr. Chairman, I should like to nominate Dr. Thorp. In my own opinion, the secretary is much more important than the chairman, from my observation, and Dr. Thorp certainly has shown a lot of enthusiasm and a lot of energy, and he is a good worker. I should like to see Dr. Thorp continue as secretary.

CHAIRMAN DUKES: Are there any further nominations? It seems that Dr. Thorp will be one of them, anyway. We must have more nominations for the secretaryship. Let us have at least one more.

DR. BRANDLY: I nominate Dr. Schmidt.

CHAIRMAN DUKES: Are there any further nominations?

B. M. LYON (Pearl River, N. Y.): I move that

the nominations be closed and the secretary cast one ballot for the two nominees.

... The motion was regularly seconded. . .

CHAIRMAN DUKES: You have heard the motion. Are there any comments? If not, all in favor of the motion, signify by saying, "aye"; opposed, "no." The motion is carried.

Now, we shall proceed with the presentation of papers, unless there is another item of business that somebody wishes to bring before the Section. The next paper is, "A Bacteriological Study of the Aerobic Flora in Pneumonic Lungs of Swine," by Frank Thorp, Jr., of Fort Collins, Colo., and F. W. Tanner of Urbana, Ill.

... Dr. Thorp read the prepared manuscript. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper is, "A Blood Picture in Hog Cholera," by H. C. H. Kernkamp of St. Paul, Minn.

... Dr. Kernkamp read his prepared manuscript. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper is entitled, "Variable Factors in the Measurement of Red Cell Sedimentation," by R. E. Nichols of Columbus, Ohio.

R. E. NICHOLS: Mr. Chairman, I was glad to hear Dr. Kernkamp mention sedimentation. I have been very much interested in it for several years. I should like to explain the theory of the subject somewhat in detail, in order to illustrate certain basic principles of sedimentation.

... Dr. Nichols discussed several important facts relative to sedimentation and continued, reading his prepared manuscript. [To be published, with discussion.]

CHAIRMAN DUKES: The next paper is entitled, "A Method for Correlating Serum Calcium, Phosphorus, and Protein Findings in the Clinical Study of Horse Blood," by A. Henry Craige, Jr., of Philadelphia, Pa., and John D. Gadd of Towson, Md.

... Dr. Craige presented the prepared manuscript. [To be published.]

CHAIRMAN DUKES: Are there any questions you would care to ask Dr. Craige?

The next paper is entitled, "The Behavior of Brucella Vaccine in Various Excipients in Animal Inoculations," by A. Eichhorn, C. K. Mingle, and F. M. Murdock of Beltsville, Md.

... Dr. Eichhorn presented the prepared manuscript. [To be published, with discussion.]

CHAIRMAN DUKES: The last paper on the program is, "Incubating Hen's Egg as a Culture Medium for *Brucella abortus*," by H. J. Metzger, Mrs. Freida R. Stokes, and J. W. Bartlett of New Brunswick, N. J.

... Dr. Metzger presented the prepared manuscript. [To be published, with discussion.]

CHAIRMAN DUKES: If there is nothing further to come before the Section, we stand adjourned.

... The meeting adjourned at 4:35 p. m. . .

Section on Small Animal Practice

August 30, 1939

THE SECTION on Small Animal Practice convened at 9:30 a. m., J. E. Ruble of Orlando, Fla., serving as chairman.

H. D. BERGMAN: Due to illness in his family in Boston, George B. Schnelle can not be present this morning. I have received the following wire from him:

Regret that I can not be in Memphis today. Absence of Dr. Schroeder and continued serious illness of Dr. Dailey make my presence impossible. Best wishes for a successful meeting.

I am asking Dr. Ruble of Florida to take Dr. Schnelle's place.

CHAIRMAN RUBLE: Have we any reports from the secretary?

C. P. ZEPP (secretary): Unfortunately, this section has no reports. However, I think I know what Dr. Schnelle had in mind and would have had to say. There is one thing that we, as the section having to do with small animals, should do and that is to attempt to establish some sort of continuity in our section. Such things that take place here, if they are to be carried out, that is, with relation to small animal practice and the problems of the practitioners, should, I think, be within our control.

At the present time the problems of the small animal practitioner are handled and settled through the Board or by the committees which they may appoint. I think that if we are going to make this section a success, and of some value to us to decide our problems—and they

are of inestimable value to us—we should demand that we have some method of carrying on from year to year and solving these problems.

There is nothing that I can do about it, and nothing that Dr. Schnelle could do if he were here. We should consider that matter and bring pressure to bear so that we can elect our chairman and secretary and have that chairman and secretary appoint committees that will carry on essential work and make reports. Dr. Schnelle and I talked this over and he has requested that we attempt to secure action on it.

CHAIRMAN RUBLE: I want to thank you for that report; it is certainly food for thought. I have heard it discussed in a good many places in the past day or two.

We are going on now with our first paper, which is "The Hematology of Avitaminosis A in the Dog," by M. W. Emmel, Agricultural Experiment Station, University of Florida, Gainesville, Fla.

... Dr. Emmel read his prepared paper. [To be published, with discussion.] . . .

CHAIRMAN RUBLE: Next, we have a paper on "The Use of Vitamins and Vitamin Preparations in Small Animal Practice," by M. L. Morris, Raritan Hospital, and W. C. Russell, department of agricultural bio-chemistry, Agricultural Experiment Station, Rutgers University, New Brunswick, N. J. Dr. Morris is not here but I understand that Dr. Bower of Kansas will present this paper.

DR. BOWER: The men who prepared this paper

are research men and I am a small town practitioner; but I promised Dr. Morris that I would do the best I can, and I hope you will bear with me. This manuscript is new to me and I might say that I have been studying it for three days. I am sure that there will be considerable discussion on this paper and there are probably men in the Section who can take the lead in this discussion.

... Dr. Bower presented the prepared paper. [To be published.]

CHAIRMAN RUBLE: You have listened to a very interesting and enlightening paper read by Dr. Bower. The paper is now open for discussion.

DR. HERMANN: I should like to make this suggestion, Mr. Chairman: Inasmuch as the author of the paper is not present, I do not feel that, in justice to him, we should ask questions about it. In other words, Dr. Morris is not present to answer the questions, and I make the motion that we do not discuss it in his absence.

CHAIRMAN RUBLE: That may be a good suggestion. We have one more paper and, at the suggestion of Dr. Hermann, we shall pass on to this next paper. After it has been presented, if we wish to go back and discuss Dr. Morris' paper, we can do that.

Our next paper is "Blood Parasites of the Dog," by R. L. Mundhenk, Alabama Polytechnic Institute, and J. E. Green, Auburn, Ala.

... Dr. Mundhenk read the prepared paper. [To be published, with discussion.]

CHAIRMAN RUBLE: That finishes our program for this morning, but I have a message from President Way. This morning, our secretary, Dr. Zepp, discussed with you the plan of the president of this association in electing our own chairman and secretary from year to year to arrange our programs. I shall read the message from President Way:

It is the desire of the executive branch of the A.V.M.A. to increase the autonomy granted the various sections in order that they may function more to the liking of the individual members. It is hoped that the constitution and by-laws may be changed before long to permit more freedom in the selection of the chairman and secretary of each section.

To this end, and in a spirit of cooperation, will you endeavor to secure for me by popular vote at a full meeting of your section, the names of two men, either of whom the members of your section would like to have act as chairman at the next meeting, and two men either of whom you would like to have act as secretary. The president will be glad to appoint the chairman and secretary for the 1940 meeting from your selections.

CHAIRMAN RUBLE: The programs for the future are being placed in your hands and Dr. Way has asked for the selection of two names for secretary and two for chairman, one of whom will be selected for the 1940 meeting.

This is a thing that requires a little thought. My suggestion is that we think it over during the luncheon hour and, at our afternoon meeting, we shall select these members. What are your suggestions?

DR. BOWER: I know that this thought has been running through the minds of the Execu-

tive Board members for some little while that the sections should select their own officers. About ten or eleven years ago this was the custom. In view of the fact that I have heard criticism from other sections, I believe that such elections should be held. As our chairman has suggested, it would be wise to think this thing over during the luncheon hour and then, this afternoon, come here prepared to suggest to our president at least two or more names for each of these positions, thereby, as I understand his message, giving him a chance to choose one from each of the candidate lists we submit.

DR. BOUR (Louisiana): In response to the suggestion of Dr. Bower of Kansas, it has occurred to me that it might be helpful if more than two names are mentioned. I suggest that after the names are brought up this afternoon, we take a ballot and ask everybody to vote on it. Since there probably will be more than two names mentioned for each office, I believe that everyone should vote.

DR. Goss: We should bear in mind, in the election of our secretary and chairman, that sometimes these people are so located that they may be unable to attend. The thought occurred to me that we ought to have two committees and have each of the committees bring in a ticket. In that way we could think of a man who could attend regularly, from year to year.

CHAIRMAN RUBLE: Your thought is that we should have two committees appointed?

DR. Goss: Yes, and let everyone be present. Then, everyone can bring forward a ticket and we can then vote to see which one is elected. Of course, here we have a different situation because our president is going to select one of the two that we nominate.

CHAIRMAN RUBLE: He asked that two names be presented for each office and that one be selected.

DR. BOWER: I wish to second the remarks made by Dr. Goss. I think that he is absolutely right in suggesting that we should elect somebody who can be in attendance regularly at all times. I wish to make the motion that we follow the suggestion made by Dr. Goss that you, as chairman, appoint a committee or, if you like, two committees, one for chairman and one for secretary; draw up a ballot to select a number of candidates, so to speak, and have them presented this afternoon so that the members of the Section can take a vote and select their men for the two offices.

CHAIRMAN RUBLE: You said one or two committees. Which do you want? I would suggest that one committee handle it because there may be a duplication of names.

DR. BOWER: You are right. I shall amend the motion; there should be one committee.

CHAIRMAN RUBLE: You have heard the motion that the chair appoint a committee to submit a ticket for this afternoon's meeting. Do I hear a second?

... The motion was seconded.

CHAIRMAN RUBLE: The motion has been seconded. Is there any discussion?

DR. BOWER: My thought is that we can not

have more than two for selection. We shall have to keep it down to that number.

CHAIRMAN RUBLE: There might be two or three names. I suggest that we pick out the highest two and vote for the first two of them. One will be elected.

Are you ready for the question? All in favor of the chair's appointing a committee, to select a ticket to be voted on this afternoon so signify by saying "aye"; opposed, "no." The motion is carried.

The chair will appoint a committee. It is going to take a few minutes to do this. The men selected for this committee will be notified very shortly. I am not going to ask you to remain until the chair selects a committee, but at 1:30 this section will reconvene. Is there any matter to be discussed before we adjourn.

DR. BRYAN: Yesterday afternoon, we were discussing the rabies situation. We have been vaccinating dogs in Alabama, and I think that when we have a little more time, we ought to discuss this situation. From a personal standpoint, we shall lose a lot of money unless we do vaccinate the dogs. I should like to hear from other practitioners on this matter.

CHAIRMAN RUBLE: Gentlemen, is it your desire that we discuss the rabies situation now or that we adjourn for luncheon?

DR. ZEPP: I move that we adjourn until 1:30.

CHAIRMAN RUBLE: We have a motion for adjournment.

... The motion was seconded and carried. . .

CHAIRMAN RUBLE: We now adjourn, to return promptly at 1:30 p. m.

Afternoon Session

CHAIRMAN RUBLE: Gentlemen, will you please come to order? The first paper for this afternoon is "Enteritis in Dogs and Some of Its Complications," by Leonard W. Goss, Ohio State University, Columbus, Ohio.

... Dr. Goss read his prepared paper. [To be published, with discussion.]

CHAIRMAN RUBLE: Your chairman and secretary have been swamped with requests from many sources to open this meeting to the discussion of rabies—vaccination for rabies. We are going to confine this discussion to about 20 minutes. We ask that you do not go into it in too great detail. I am going to ask Colonel Kelser to open this discussion.

COLONEL KELSER: I haven't very much to add to what we have already reported in the majority report, which, I presume, most of you heard Monday night. There are just one or two thoughts that have occurred to me since that time, and especially after Dr. Webster's paper was read yesterday afternoon.

In the first place, I believe that the veterinary profession, the biological houses and the U. S. Department of Agriculture, which department licenses the various rabies biological products that are now and have been available for years, have been "on the spot" for years, more or less. It is a fact that if after 17 years—I think that is right! I believe that the first rabies vaccine came into being about 1922—of painstaking work we are to allow a group of lay

inspectors advise us that it is no good, then we are in a terrible position. I do not believe it. I think that all of us who have had anything to do with rabies vaccine know that it has a very definite value, that the results from it, while not as close to perfection as we would like to have them, show it to be of definite value. We have emphasized that the owner of a dog that is presented for vaccination against rabies should be advised that there is not a 100 per cent guarantee that the animal will not contract the disease under any circumstances.

I recall very vividly an instance involving the wife of an officer of the Walter Reed Hospital. Some question was raised as to whether or not her dog had rabies. She said that it could not be infected because it had been vaccinated the previous fall. Again, the wife of an army officer had read an article in *Country Life* and said, "I see in *Country Life* that the vaccine I have been having administered to my dog for five or ten years has been a waste of time and that I have subjected the dog to undue risk and it has been to no avail."

And so, we are more or less in a difficult position. I think that the recommendations we have made are very modest. There is nothing radical about our proposal, and I think that if it is put into effect, rabies vaccination will be considerably improved.

Regarding Dr. Webster's paper: I have known Dr. Webster for a long time. He is a good friend of mine, and he sent me his manuscript before it was presented, but nevertheless we disagree on the value of rabies vaccine as it is used with dogs as compared to his results with mice. But, be that as it may, one can take Webster's own report and contradict his basic conclusion. He produced 100 per cent immunization with his mice, and he states that if it is possible to immunize mice in this fashion with this vaccine, it is his basic conclusion that you can immunize dogs. I had lunch with him yesterday, and I asked, "Dr. Webster, how about all of this Pasteur treatment since the days of Pasteur?" We know that 25 to 36 per cent of the patients used to develop rabies when the Pasteur treatment had not been administered, but that since that treatment the rate has been reduced to less than one-half of 1 per cent in ordinary cases and to 1½ per cent in the group that are most severely exposed, such as people who are bitten about the hands, face and mouth. I said, "Is that due to the 14 injections, or has there been a revolution of some sort which has failed to produce this disease in man?" He said, "I am not prepared to answer that question."

But, I think that we are in a difficult position. Incidentally, the lay press is reporting these things that are derogatory to the veterinary profession and biological supply houses and this vaccine. And, the lay public is seeing precisely what the kennel associations opposing the use of the vaccine want them to see. We have to put out scientific data through the lay press and magazines; but, after all, they are causing all of the trouble and molding public opinion, and I see no other means of combating

it but to have the information that goes out from this meeting follow the same channel.

DR. STAPLETON (Georgia): I think that every practitioner who has given vaccine believes that it does some good. I have never told dog owners that I believe rabies vaccine to be 100 per cent effective. I have always told them to follow it up with multiple treatment. But, I think that what we have overlooked all the way through is the fact that if these laboratory experiments show that we can get 25 per cent or 30 per cent immunization and that if we vaccinate all the dogs in our community, then we shall have practically 100 per cent. Take your own dog, place him near a rabid dog, and the chances are that he will be bitten. If we can get 25 per cent immunization, we lessen the chances of being bitten. I think that vaccination is very important.

DR. PERCY (West Va.): I am one of the veterinarians in West Virginia who has been trying to force vaccination, but we have never been able to enforce it. During the past five years I have vaccinated over 4,000 dogs. We have had only a few failures. In that time I have seen 189 cattle lost. In our community—Charleston—150 to 300 people take the Pasteur treatment yearly. We have had nine human deaths in that vicinity. I might say that in this rabies situation, we have had many experiences with the doctors of human medicine. As an example, a friend of mine called me in to see if one of his patients had rabies. In this case he thought it was that. Two other physicians had treated this man and diagnosed his ailment as bronchitis. His condition was becoming progressively worse. I went to see this patient and the doctor said, "You have seen a few cases of rabies. What is your opinion?" There was no question in my mind that it was a case of rabies.

In another case a man had picked up a stray dog and put him in his car. When he got to the hunting field, there was a fight among the dogs. Four dogs in the fight developed rabies within 22 days. Twenty-one days later this man developed rabies and died. A dog with him was in the hospital six months before he developed rabies. Ten days prior to that a little girl died in the hospital. Her death was reported to have been caused by pneumonia, but after the young man died, four of the physicians said, "We are convinced that this little girl died of rabies instead of pneumonia." She was taking treatment with five in the family; she had been severely burned and was in the hospital. While taking treatment for the burns, she developed rabies and died.

There is our hardest fight. We had two cases that developed rabies after the rabies treatment had been given. There is no question, however, that the vaccine will produce immunity—not in 100 per cent of the cases, but, for that matter, what vaccine of the medical profession is 100 per cent perfect? Is smallpox vaccine 100 per cent effective? Is typhoid vaccine 100 per cent? No. And, we do not claim that our vaccine is, but we do claim that under proper conditions in the administration of our vaccine we secure satisfactory results.

DR. VON GLIMP (Atlanta, Ga.): We practi-

tioners in Georgia are confronted with a radio broadcast from the state health department. I practice in a suburb of Atlanta with a population of about 30,000. Recently, a client living in the country brought his dog to our hospital. When this puppy was brought to the city, it bit eight children and 25 dogs.

Since I am the health officer of the suburb, I collected these 25 dogs and kept them under quarantine for 30 days. One of them developed rabies. The eight children were given the Pasteur treatment by the county health officer.

We have, in the past eight years, absolutely lived up to the requirements of a city or county that should have proper inoculation, not in the county, but in the city. This city has killed all of the stray dogs. There never has been any kind of a rabies epidemic within the city of Decatur. However, I have handled, on an average in the past eight years, 50 cases of rabies annually in dogs that came outside of the city limits. Like the gentlemen who just spoke, I can not claim that this vaccine is 100 per cent effective, but I do claim that we have secured results through the inoculations and the enforcement of the law.

I should like to go on record as saying that we do not claim that this inoculation with vaccine is 100 per cent perfect, but I do unequivocally assert that it is the best thing that any health department, state organization or laboratory has to offer at the present time and I do not think that we should be condemned on statewide broadcasts for using the best method we have, that is, to inoculate the dogs and prevent the spread of rabies in any city or county in the United States.

DR. WRIGHT (Georgia): In 1929, we had a severe outbreak of rabies in Atlanta. Mad dogs were brought to the hospitals practically every day. In 1929, I handled over 300 rabid dogs. The citizens and the Atlanta medical officers cooperated to deal with the rabies situation in that city. At the time, they were running a dog wagon, catching strays on the street, and veterinarians were charging \$2.00 for immunizing dogs. To aid the city authorities, we agreed to vaccinate dogs at \$1.00 per head and charged a \$1.00 license fee. The city invoked that ordinance. They added another dog wagon and four or five men to pick up strays on the street. Between 1929 and 1939, I vaccinated between 3,500 and 5,000 dogs. In the city of Atlanta and in surrounding townships vaccination is compulsory. The other veterinary hospitals in Atlanta have been vaccinating as many dogs as I—perhaps more.

Our records of rabies in Atlanta and surrounding townships show that the incidence of the disease has dropped considerably.

While one injection for rabies is not a 100 per cent efficient measure I do know that the percentage of rabies has dropped. The dog catchers have been catching about the same number of dogs each year in Atlanta and the surrounding territory. They have been catching about 10,000 dogs a year. Something has caused the drop in rabies in Atlanta. I attribute it to the immunization of the dogs and I am in favor of continuing the rabies inocula-

tion under the present method until we find a better method to replace it.

CHAIRMAN RUBLE: Gentlemen, are there any other of you who would like to discuss this question? I have gone through this for a year or two. The two daily papers in Orlando, Fla., have made the most vicious attack on the veterinary profession, referring to us as "racketeers" and "thieves." Unfortunately, we can not fight newspaper publicity by what we have to say as practitioners, because people know we are fighting for our livelihood. We are going to have to fight from a different angle. When this attack came out in the newspapers, I talked with the mayor and city council and they asked me to furnish concrete evidence as to the value of rabies vaccine. I sent out countless hundreds of letters all over the country. I sent letters to laboratories and other places asking for this information, and I have yet to get the first reply giving me any scientific, concrete data covering rabies vaccine and its value. The only reports I get are those such as we have here today. Most of them come from veterinarians and, therefore, have no value for our purposes. These papers say it is a "racket," that it is our fight for existence.

The paper signed by Dr. Webster and read here yesterday stated that the experiments of the Rockefeller Institute have proved that rabies vaccine has no value. Some of the men responsible for that statement are members of our own profession. Dr. Lentz of the University of Pennsylvania thought the same way. And so, the newspapers fight us with ammunition furnished by our own members.

The laboratories do not give us much encouragement. They have failed to furnish me any worthy evidence. The suggestion has been made that we publish a pamphlet. The press will not help us, but if we can publish a pamphlet for wide distribution over the United States, with letters on the stationery of the different health associations, not of the veterinarians but of the city and county health associations, that will give us a good start.

DR. VON GLIMP: I move that we pass a resolution thanking the president of this organization, the secretary and Colonel Kesler for appearing before us and hearing our side of this rabies vaccination.

CHAIRMAN RUBLE: We have a motion before us. Do I hear a second?

PRESIDENT WAY: I did not intend to make any remarks concerning the technical phase of rabies vaccination. I am sure that we all appreciate the intent of this motion and regard it simply as a personal compliment to the men who are bound to serve you and the Association to the best of their ability. We do appreciate that compliment, but it certainly is not necessary to go on record to that extent.

I have been very much interested in the remarks of the chairman and, although I know little about small animals, it seems to me that we, as the American Veterinary Medical Association, may be tackling this problem from the wrong end.

Many of you no doubt play golf. I tried it, found I could not play it and I gave it up. But, I have heard many competent players say

that "you shouldn't press the game." I feel that we may be pressing the game in pressing the subject of rabies vaccination at a time when we are obliged to say that it is not 100 per cent efficient. We are not prepared to say to what extent it is efficient.

Now, then, from the standpoint of the control of all infectious diseases, there are certain limitations; there are certain methods and modes of transmission and there are certain fundamental rules of control which are, in the main, usually very effective. We know that in certain countries rabies has been eliminated—not only controlled, but absolutely eliminated. There is no rabies in England; there is no rabies in Australia; there is no rabies practically on the continent of Europe, where the disease has been controlled.

Now, would it not be better for the Association to outline a method whereby rabies can be effectively controlled? To my mind, the handling of rabies control at the present time is improperly delegated. There are a thousand and one different health officers who are attempting to enforce rabies control. We all know that it is a "hot" problem. The officials of the United States government who are charged with the control of infectious diseases know that it is a serious problem. However, regardless of how serious it may be, the attempt at the control of rabies at this time is, from my view, in the wrong hands, and as soon as the public, the dog owner, and the health officials who are the guardians of public health turn the control of rabies over to the veterinary profession, under the supervision of the federal bureau of animal industry—for, it is a national problem—then and only then can this disease be properly controlled.

Now then, my point is this: Maybe we are pressing the game by attempting or assuming or appearing to attempt to enforce rabies vaccination on a public the majority of which are being educated to the fact that the vaccination of dogs for rabies is not efficient; and, inasmuch as we, ourselves, are obliged to admit that it is not 100 per cent efficient—and we can't give the percentage of efficiency—I think that the A. V. M. A. would be on much more tenable ground if it presented a program that would be efficient and would control the disease. I believe that the suggestion I have made—is not entirely my thought; it is not my original thought—would place us in a much safer and more tenable position.

DR. MILLER: I want to second President Way's suggestion here. After all of the talk of three days by scientific men as to what should be done, I believe that the gate is closed. However, I agree fully with Dr. Way. He has stated that the veterinary profession has certain fundamental things to do to control this disease. If vaccination is not as perfect as we should like to have it, then the scientific men like Dr. Webster should make it more perfect. But, at the present time it is the best that we have.

DR. FRICK: I happened to go to the Pasteur institute last year and I asked innumerable questions. I have a great respect for rabies. It is the most fearful disease we encounter.

I do not want to take any chance with rabies. If I were bitten by a rabid dog, I would want to take all of the various Pasteur treatments, because it has positively been shown that they have definite value. It does not make any difference if their value is 100 per cent or 50 per cent or 20 per cent; I do not want a dog around my children that has not been vaccinated against rabies. I don't want to take a chance with rabies; and just as long as rabies vaccine has any percentage of value, I want it to be used.

CHAIRMAN RUBLE: Is there any further discussion? We have a motion, but if there is any further discussion of this subject, the meeting is open for it. The motion is that we tender a vote of thanks to these gentlemen for appearing before us.

... The motion was seconded. . .

I have a suggestion that I should like to make. I propose that instead of this small animal section's taking any official action, we let these three gentlemen carry our message back to Congress and ask that they take some action in whatever way they see fit.

DR. MOUNT: It is my opinion that the cities and counties should get together and form rabies organizations, dividing the cities into sections and opening up rabies sections throughout the counties. We can not put on a rabies campaign in the United States because the people will not live up to the law.

CHAIRMAN RUBLE: We are going to have to close the discussion. I think that it is the general opinion that the three gentlemen we have had with us should convey to Congress the attitude of this meeting. We have three other papers, and we also have an election, so we must go on. Gentlemen, we have an election. I am going to ask the secretary to read the report of the committee. Dr. Zepp.

DR. ZEPP: The Association requested this section to nominate men for the positions of chairman of the section and secretary of the section.

We received notice of this before luncheon, but the committee has had very little time to function. We did begin with two names; I shall post them on this blackboard and open the meeting. Remember, however, that other names may be put up for nomination. Nominations are open for chairman. The committee could think of only these two names so far. You gentlemen may have some suggestions.

... Names written on the blackboard were: John Wells, West Palm Beach, Fla., and Samuel R. Espy, Oklahoma City, Okla.

... At this point Dr. DeBell was offered for the chairmanship. . .

DR. DEBELL: I should like to request that my name be removed.

CHAIRMAN RUBLE: Dr. DeBell's name has been proposed and he has requested that it be removed.

... Dr. Frick of Kansas was nominated for chairman. . .

CHAIRMAN RUBLE: Dr. Frick has been nominated for chairman. Do I hear a second?

... The motion was seconded. . .

DR. ZEPP: I spoke to Dr. Frick and asked that we be allowed to put his name up but he wishes to be excused. He says that next year he may not be able to be present because other duties will take up much of his time.

CHAIRMAN RUBLE: You have heard the nomination of Dr. Frick and Dr. Zepp's explanation of the doctor's attitude. He asks that his name be withdrawn.

DR. HERMANN: I think that we have made a fair selection. I move that the nominations be closed.

CHAIRMAN RUBLE: There is a motion that the nominations be closed.

It has been seconded. Is there any discussion? All in favor of our closing the nominations, so signify by saying "aye"; opposed, "no."

... The motion was carried. . .

John Wells of West Palm Beach was nominated for chairman; Stevens and Nichols for secretary, for 1940.

... A motion was made and seconded to close the nominations. . .

CHAIRMAN RUBLE: Is there any discussion? All in favor, say "aye"; opposed, "no." The motion is carried. That completes our election. We shall now go on with the program.

The next paper is "Tumors of Small Animals," by Peter Olafson, New York State Veterinary College, Ithaca, N. Y.

DR. OLAFSON: It is quite an honor to be given the privilege of speaking before this section. I have a few pictures on tumors that I should like to show you.

CHAIRMAN RUBLE: Pardon me just a minute, Dr. Olafson. I see that we are late with our program, and I am just advised that we have with us R. O. Rychener, M. D., of Memphis. Dr. Rychener is on the program and this is the time that he is scheduled to speak to us. With your approval, and with the permission of Dr. Olafson, we shall ask Dr. Rychener to speak now. Will you consent to this, Dr. Olafson?

DR. OLAFSON: Certainly.

CHAIRMAN RUBLE: The next speaker is R. O. Rychener of Memphis, Tenn., who will speak on "Common Diseases of the Eye and Their Treatment." I take pleasure in introducing Dr. Rychener.

... Dr. Rychener presented his prepared address. [To be published.]

CHAIRMAN RUBLE: Dr. Rychener, this association is deeply indebted to you for presenting this splendid talk. I am confident that you have seen, by the attentive attitude of those in attendance, that it is appreciated. We thank you very much.

DR. RYCHENER: I am glad to have been here, gentlemen, and I regret that it is necessary for me to rush away. I thank you.

CHAIRMAN RUBLE: We shall go on with the paper by Dr. Olafson.

... Dr. Olafson presented his prepared lecture, which was illustrated with lantern slides. Following, C. P. Zepp of New York, N. Y., presented a paper on "Improved Surgery Technic." A motion was then made and carried that the Section be adjourned.

Section on Sanitary Science and Food Hygiene

Wednesday, August 30, 1939

THE SECTION on Sanitary Science and Food Hygiene convened at 9:00 a. m., Milton R. Fisher of the city health department, St. Louis, Mo., presiding as chairman.

CHAIRMAN FISHER: Gentlemen, we shall now come to order. We are a little late, and in order to be on time with the papers, we must begin immediately. We are fortunate in having many outstanding contributors, and I am certain that you are going to profit from the program. Before we proceed any further, I wish to introduce our capable secretary, M. B. Starnes of Dallas, Texas. Mr. Starnes, will you make a few remarks?

SECRETARY STARNES: Thank you, Mr. Chairman. Indeed, my remarks will be few. It has been a pleasure to have received the willing cooperation of the speakers who will appear on this program. The chairman of the Section and I, through our endeavors, have been able to receive acceptances from what I consider to be the outstanding men in their particular fields. And so, with those few remarks, Mr. Chairman, I think that we can proceed with the program.

CHAIRMAN FISHER: Thank you, Dr. Starnes. The first speaker is a man who has been in this work a long time. Many of you know him. He resides in this district; he is associated with the U. S. Public Health Service; he has helped a lot of us very much. At this time it gives me great pleasure to present Franklin O. Clark, milk specialist, U. S. Public Health Service, Washington, D. C., who will speak to you on "Some Present Trends in Milk Sanitation." Dr. Clark.

... Dr. Clark read his prepared paper. [To be published, with discussion.]

CHAIRMAN FISHER: The next paper will be "The Laboratory Diagnosis of Rabies; Improved Methods." This will be given by Joseph C. Willett.

... Dr. Willett read his prepared paper. [To be published, with discussion.]

CHAIRMAN FISHER: The secretary will now read an announcement.

... Secretary Starnes read the following message from President Way:

It is the desire of the Executive branch of the A.V.M.A. to increase the autonomy granted the various sections in order that they may function more to the liking of the individual members. It is hoped that the constitution and by-laws may be changed before long to permit more freedom in the selection of the chairman and secretary of each section.

To this end and in the spirit of cooperation, will you endeavor to secure for me by popular vote at a full meeting of your section the names of two men either of whom the members of your section would like to have act as chairman at the next meeting, and two men either of whom you would like to have act as secretary. The president will be glad to appoint the chairman and secretary for the next meeting from your selection.

CHAIRMAN FISHER: Gentlemen, you have heard this and it will open for discussion. Is there any discussion? What is the wish of the Section pertaining to this.

DR. HARDENBERGH: I think that it should be left to the chair to appoint the committee.

CHAIRMAN FISHER: Do you want to put that in the form of a motion?

DR. HARDENBERGH: Yes, I do.

CHAIRMAN FISHER: All in favor say "aye" opposed "no." We shall act accordingly.

Would it be the wish of this section to nominate that committee. I think that it should be indicated instead of the chair appointing.

SEVERAL MEMBERS: Let the chair appoint.

DR. FITCH: Those of us who have attended meetings for a good many years recognize in the suggestion of the Executive Board a return to a previous custom, the constitutional prerogative in connection with the section chairman. I think that it would be opportune if this nominating committee would consider whether the nominees should appear in the session of the section meeting in the A.V.M.A. or whether some other meeting should be provided for the election of section officers. Have I made myself clear? If not, I shall repeat what I tried to say.

The recommendation of the Executive Board merely means the return to the initial provisions for section officers, which, by the way, did not work out. I have attended a good many sections, various meetings of the A.V.M.A., in which there were two or three people scattered around here for nominating the officers, and for that reason the constitution was changed to the custom which prevails at the present time. Now, my suggestion, Mr. Chairman, is that the nominating committee separate itself from this meeting for the election of section officers.

CHAIRMAN FISHER: Thank you, Dr. Fitch.

In some of the sections they are experimenting with abstracts to speed up things, and they are asking that the abstracts of papers be distributed either prior to the reading of the paper or just after. They are wondering which would be best and they want that put before us. Moreover, it appears to me that if these were distributed prior to the reading and that if we cut down on the lengthy papers and allow time for discussion, then the men interested in further study of the papers could read them in the JOURNAL. I believe that we could accomplish more if that were done. Does anybody wish to comment on that? Do you all feel that this will be the satisfactory method? Did you understand that? Did I make that point clear? You understand that some of the sections are operating under that method. If the abstracts of papers were issued prior to the meeting, we would have time to discuss them. Such a procedure would shorten the paper and give more time to general discussion. They have experimented along that line in some of the sections and they are wondering whether or not this section would endorse that practice.

DR. COTTON (Alabama): Before the meeting?

CHAIRMAN FISHER: That seems to be the main question; they want to know whether we would like to have the paper prior to the meeting or after the reading. Shall we next year issue these abstracts at the beginning of the meeting, or just how?

DR. COTTON: I would rather have the whole paper.

DR. GOEHRING: I think that they should be distributed before the meeting.

CHAIRMAN FISHER: I think that would be the better plan; it will allow more time.

A MEMBER: I noticed that some of the other sections were distributing abstracts at the time the paper was read.

CHAIRMAN FISHER: It seems to me, too, that it should be prior to the meeting, so that we would have time to study it.

DR. FREDERICKS: Of course, to my understanding, the copy should be presented before the paper is read; certainly not afterwards.

CHAIRMAN FISHER: Do you wish that as a second to Dr. Goehring's motion? All in favor say "aye"; opposed, "no." The motion is carried.

The next paper on the program is "Some Observations of Undulant Fever Epidemic at Michigan State College," by I. Forest Huddleson. A lot of you know him; others have read articles written by him.

... Dr. Huddleson delivered his address. [To be published, with discussion.]

CHAIRMAN FISHER: The next paper is "Bang's Disease and Its Control in the Dairy Herd," by W. E. Cotton, professor of veterinary medicine, Alabama Polytechnic Institute, Auburn, Ala.

... Dr. Cotton presented his prepared paper. [To be published.]

CHAIRMAN FISHER: In order that we may start our afternoon session promptly, it seems best that we adjourn now. Therefore, we stand adjourned until 1:30.

... The meeting adjourned at 12:15 ...

Afternoon Session

CHAIRMAN FISHER: Gentlemen, we must get started. The first paper this afternoon is "New Phases of Milk Control," by M. O. Robinson, professor of bacteriology, Alabama Polytechnic Institute, Auburn, Ala.

... Dr. Robinson read his prepared paper. [To be published, with discussion.]

CHAIRMAN FISHER: The next paper is "Trichinosis and Its Control," by L. E. Starr, professor of parasitology, Alabama Polytechnic Institute, Auburn, Ala.

... Dr. Starr read his prepared paper. [To be published.]

CHAIRMAN FISHER: The next presentation is "A Thorough Understanding Between Milk Producer, Inspector and Laboratory Technician," by Frank E. Kitchen, dairy and abattoir supervisor, Department of Health, Greenville, S. C.

... Dr. Kitchen addressed the Section. [To be published, with discussion.]

CHAIRMAN FISHER: The next paper on the program is "The Veterinarian's Participation in

the Work of the W. K. Kellogg Foundation," by Robert Harkness, director of the Barry county health department, Hastings, Mich.

... Dr. Harkness read his address. [To be published, with discussion.]

DR. COTTON: If it is in order, I move that we thank Dr. Harkness.

DR. LEUTH: I second the motion.

CHAIRMAN FISHER: A motion has been made and seconded. All in favor, say "aye"; opposed, "no." The motion is carried. Is there any other discussion?

DR. COTTON: Mr. Chairman, I move that we adjourn.

DR. LEUTH: I second the motion.

CHAIRMAN FISHER: It has been moved and seconded that we adjourn. All in favor, say "aye"; opposed, "no." The motion is carried. ... The meeting adjourned at 4:30 p. m. ...

Section on Poultry

August 30, 1939

THE SECTION on Poultry convened at 9:15 a. m., C. B. Cain, chairman of the Section, presiding.

CHAIRMAN CAIN: Gentlemen, the meeting will now come to order. I regret to announce the death of F. D. Patterson, which necessitated a substitute's presiding this morning. I do not believe that we have any reports to be sent in from this group, and in view of the fact that some of these papers are quite lengthy, we ought to go ahead with the meeting.

The first paper is "The Relationship of Ruptured Yolks to Fowl Paralysis," by E. M. Moore of Morgantown, W. Va.

... Dr. Moore presented his prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: The next paper is "Duck Septicemia," by C. S. Gibbs, Pearl River, N. Y.

... Dr. Gibbs presented his prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: The next paper is entitled, "Fowl Typhoid in Turkey Poults," by E. P. Johnson and Morris Pollard of the Virginia Polytechnic Institute, Blacksburg, Va.

... Dr. Johnson presented the prepared manuscript. [To be published.]

CHAIRMAN CAIN: Is there any discussion of this paper? If not, the next paper is "Pseudo-Tuberculosis Infection in the Blackbird," by F. R. Beaudette of the New Jersey Agricultural Experiment Station, New Brunswick, N. J. Because of Dr. Beaudette's absence, Dr. Black will read the paper.

... Dr. Black read Dr. Beaudette's prepared manuscript. [To be published.]

CHAIRMAN CAIN: The next paper is, "What the Practicing Veterinarian Should Do to Develop Poultry Practice," by J. L. West of the Alabama Polytechnic Institute, Auburn, Ala.

... Dr. West read his prepared manuscript. [To be published.]

CHAIRMAN CAIN: The next paper is "What speaker, we shall withhold discussion of the past three papers until after the presentation of the next one, which is "The Enforcement

of the Food and Drugs Act in Misbranded Poultry Remedies," by H. E. Moskey of the Pure Food and Drugs Administration, U. S. Department of Agriculture, Washington, D. C. . . . Dr. Moskey read his prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: I have been asked by the secretary of the Association to invite non-members here to join, and these copies of the September issue of the JOURNAL have been sent to the room to be given to any non-members who wish to have them.

I have the following communication from Dr. Way:

. . . Chairman Cain read the letter from Dr. Way concerning the election of a secretary and chairman of the Section. . .

CHAIRMAN CAIN: We are open for nominations for those offices.

DR. CURRY: I should like to place in nomination the name of Dr. Durant as chairman of the poultry section.

DR. CARPENTER: I second the nomination.

DR. BRANDLY: I nominate E. P. Johnson as secretary.

DR. MOSKEY: I second the nomination.

CHAIRMAN CAIN: Are there any other nominations? If not, the chair will entertain a motion that the nominations be closed.

DR. BRANDLY: I move that the nominations be closed.

DR. BLACK: I second the motion.

CHAIRMAN CAIN: All in favor of the motion, let it be known by saying, "aye"; opposed, "no." The motion is carried.

We shall now have a similar nomination for secretary of the Section for next time.

DR. CARPENTER: I wish to nominate Dr. Brandly as secretary.

CHAIRMAN CAIN: Are there any other nominations? We are asked to submit two names.

C. C. HISEL (Oklahoma): I nominate Dr. Carpenter.

CHAIRMAN CAIN: We shall vote on those two. Dr. Carpenter and Dr. Brandly have been nominated as the two to be presented. All in favor of Dr. Brandly, let it be known by saying, "aye"; contrary, "no." The "ayes" have it. Now all in favor of Dr. Carpenter as one selection, let it be known by saying, "aye"; opposed, "no." The "ayes" have it.

DR. HISEL: I want to make a motion that I think highly in order. I felt very sorry for the doctor who was called upon to read this long paper this morning. There is too much territory to cover for anybody to present a paper that long. Since these papers are published in the JOURNAL, anyone interested in the details can find them there. I should therefore like to move, if I can get the support of the gentlemen present, that no paper be presented in this section in the future that requires more than 15 minutes to read. I am sure it will be a boon to this section.

DR. FENSTERMACHER: I second that motion. I think it is a very good motion because it gives the members present a chance to hear more papers, and also gives more opportunity for discussion. Personally, I think the discus-

sions as a rule bring out a great deal more additional information.

DR. CARPENTER: I wish to propose an amendment. In the case of Dr. Beaudette's paper, it is a classic for the literature files and should not be limited to 15 minutes, but the presentation of the paper should be limited to 15 minutes. Thus, we can have such papers in their entirety but their presentation ought to be limited to 15 minutes.

DR. HISEL: I most heartily accept the amendment.

CHAIRMAN CAIN: You have heard the amendment, which has been accepted by the original mover. Is there any discussion? If not, all in favor of this motion as amended, let it be known by raising your right hands. All opposed, the same sign. The motion is carried.

Is there any further business to come before this section? If not, I will say that this afternoon's session is listed under the combined session of research and poultry. I do not know what definite arrangements have been made on that, but I should like to have you back on time. If there is no further business, we will stand adjourned.

. . . The meeting adjourned at 12:00. . .

Wednesday Afternoon Session

The combined session of the Section on Research and the Section on Poultry convened at 1:30, Chairman Cain presiding.

CHAIRMAN CAIN: The meeting will now come to order. This afternoon we have a combined session. As I understand it, this is more or less a session to take care of the overflow papers from other sections.

The first paper is "An Attempt to Produce Preparturient Paresis in Ewes," by Hugh S. Cameron of the division of veterinary science, University Farm, Davis, Calif.

. . . Dr. Cameron read his prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: The next paper is entitled, "Studies on the Total Ketone Bodies, Sugar and Calcium in the Blood of Nonpregnant Ewes," by Jesse Sampson, L. E. Boley, and Robert Graham of the University of Illinois, Urbana, Ill. The paper will be read by Dr. Hester.

. . . Dr. Hester read the prepared manuscript. [To be published.]

CHAIRMAN CAIN: The next paper is entitled, "A Study of the Composition of the Alveolar Air of Domestic Animals," by George T. Edds, A. & M. College of Texas, College Station, Texas.

. . . Dr. Edds presented his prepared manuscript. [To be published.]

CHAIRMAN CAIN: We shall now have the next paper, "Indoor Hen-Battery Mortality," by M. W. Emmel of the Agricultural Experiment Station, University of Florida, Gainesville, Fla.

. . . Dr. Emmel presented his prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: The next paper is "Studies on Pullet and Hen Mortality," by L. E. Boley and Robert Graham of the University of Illi-

Thursday Morning Session

August 31, 1939

The meeting convened at 9:25 a. m., President Bergman presiding.

PRESIDENT BERGMAN: The meeting will be in order, please.

Before beginning the literary program, there is a matter that I wish to introduce—a special order of business—with your permission. It has developed that the fifth vice-president elected on Tuesday is not qualified, which leaves a vacancy in that office. The nomination was made by Dr. Cameron. Dr. Cameron would like to nominate H. S. MacDonald of Toronto, and has moved that he be elected. If there is no objection to handling it in that way, I shall ask for a second.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that H. S. MacDonald of Toronto be elected to the office of fifth vice-president. All in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

You will recall also that on Tuesday a cablegram was sent to Dr. Ostertag of Germany. We have received a reply, and have tried to translate it. It is in German. The translation is as follows:

Hearty thanks for your friendly congratulations from your great organization.—Ostertag.

Due to a little difficulty with the projector, Dr. Patton has asked that we proceed with the program and call the second paper rather than his at this time, and he will appear second. Therefore, we shall now hear from R. G. Green, professor of bacteriology, University of Minnesota, on "The Vaccination of Dogs with Modified Distemper Viruses." Dr. Green.

... Dr. Green presented his subject. [To be published, with discussion.]

PRESIDENT BERGMAN: We shall now proceed with the next paper, "Some Nervous Disturbances Due to Avitaminosis B," by J. W. Patton of East Lansing, Mich.

... Dr. Patton presented his paper, with lantern-slide illustrations. [To be published, with discussion.]

(Continued from preceding page)

nois. The paper will be read by Dr. Hester of Illinois.

... Dr. Hester read the prepared manuscript. [To be published, with discussion.]

CHAIRMAN CAIN: The next paper is "The Incidence and Classification of Avian Tumors," by L. J. Goss of the University of Kentucky, Lexington, Ky. In Dr. Goss' absence, Dr. Olafson is going to read the paper.

... Dr. Olafson read Dr. Goss' prepared manuscript. [To be published.]

CHAIRMAN CAIN: Is there any discussion of this paper or of any of the other papers presented this afternoon? If not, our program is concluded. We stand adjourned.

... The meeting adjourned at 4:10. . .

PRESIDENT BERGMAN: The next paper is "Effects of Heat on Phenolized Hog-Cholera Virus," by J. D. Ray of Omaha, Neb.

J. D. RAY: This is a report of some experimental work that Dr. Whipple and I are doing. There will be a lot of things that are incomplete, probably, but we thought you might be interested in getting this much of it.

... Dr. Ray continued, reading his prepared address. [Published September, 1939, pp. 278-282.]

PRESIDENT BERGMAN: Are there any questions anyone would like to ask Dr. Ray at this time? Our time is rather limited, and if there are no questions, I shall call for the next paper, "Mineral Deficiencies: Clinical Picture, Treatment and Prevention," by Hubert Schmidt, College Station, Texas.

... Dr. Schmidt presented his prepared address. [To be published.]

... The paper entitled "The Relation of the Vitamin B Complex to the Nutrition of Domestic Animals," by Aaron Arnold and C. A. Elvehjem, was read by title only. [To be published.]

PRESIDENT BERGMAN: We stand adjourned until the general session following the meeting of the House of Representatives this evening.

... The meeting adjourned at 12:10 p. m.

The House of Representatives Thursday Evening Session

THE SECOND SESSION of the House of Representatives convened at 8:55 p. m., H. D. Bergman presiding.

PRESIDENT BERGMAN: The second session of the House will be in order. We have a lot of business for tonight, and after the session we shall go into general session for the finishing of business and the induction of officers. We shall have the roll call by states.

... Dr. Ingmand called the roll, and a quorum was found to be present. . .

PRESIDENT BERGMAN: First in the proper order of business would be the report of the Executive Board, but due to the volume of business that came before the Board today—we were in session until 6:45—and some necessary typing that had to be done, it was impossible for us to complete it. We shall have it in a very short time, however, so we shall proceed with the other items of business. Taken in regular order, the first item is the report of the Committee on Budget, of which the president is chairman. In the absence of the secretary, I shall read the report.

... President Bergman read the report of the Committee on Budget.

Report of the Committee on Budget

President's contingent fund.....\$ 800.00
President-Elect's contingent fund..... 300.00

Treasurer's contingent fund.....	200.00
Horse and Mule Association of America.....	50.00
Committee on Bang's Disease.....	100.00
Committee on Education.....	500.00
Committee on Legislation.....	1,000.00
Committee on Poultry Diseases.....	50.00
Committee on Proprietary Pharmaceuticals	250.00
Committee on Rabies.....	200.00
Committee on Veterinary Biological Products	100.00
Committee for contact with American Institute of Meat Packers.....	200.00
Total	\$3,750.00

Respectfully recommended,

(signed) H. D. Bergman
H. W. Jakeman
M. Jacob
L. A. Merillat
W. H. Ivens

PRESIDENT BERGMAN: The report is before you for approval or disapproval.

DR. WILSON (Virginia): I move the approval of the report.

D. E. WESTMORLAND (Kentucky): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the report of the Committee on Budget be approved. Is there any discussion? If not, all in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

The next report will be that of the Committee on Public Relations. In the absence of D. M. Campbell, the chairman of the Committee, the report will be presented by Dr. Schubel.

E. C. W. Schubel presented the report of the Committee on Public Relations. [To be published.]

PRESIDENT BERGMAN: You have heard the report of the Committee on Public Relations. What is your pleasure?

H. S. CAMERON (California): I move its adoption.

DR. ABXY: I second the motion.

PRESIDENT BERGMAN: We shall vote *viva voce* on motions and reports. If there is any question as to majority, we shall vote then by states.

All in favor of the motion, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

Is the Executive Board ready to report?

DR. JAKEMAN: Yes, Mr. Chairman.

Delegates of the House: Before making some specific recommendations of the Board, I want to acquaint you with one perhaps rather interesting report that was received this afternoon from Dr. Merillat regarding the Women's Auxiliary. This organization is planning a reorganization, consisting in part of the following points:

- 1) That the Auxiliary incorporate;
- 2) that the offices of the Auxiliary be in the office of the A.V.M.A. in Chicago; and
- 3) that the name be changed to signify a national organization, and that state units be created which will be divisions of the national, with state secretaries being delegated.

In other words, the Women's Auxiliary is go-

ing forward with us on our program of reorganization and enlargement.

The first recommendation by the Executive Board is that the special Committee on Parasitology be reestablished. For some reason that committee was dropped, and there has been a request that it be reestablished.

PRESIDENT BERGMAN: You have heard the first recommendation of the Executive Board. What is your pleasure?

DR. HUSMAN: I move its adoption.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the first recommendation of the Executive Board be adopted. All in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: It is recommended to the House of Representatives, in view of the changes that have been made and recommended by the president in his address, that it is impossible to draft a final wording of the constitution as the changes should appear, and that the Executive Board submit this in principle at this meeting, with the understanding that it will be put into definite form and published in the JOURNAL, if possible, in November, so that every member can read it, and that the Executive Board will discuss it at the meeting in December and have it for final approval, if possible, at the next meeting.

If there is any explanation needed on that, I shall attempt to give it.

In the revision of the constitution and by-laws, which, I believe, you have all seen, some changes have been made but, as brought out by President Bergman, in a program of expansion such as we have in mind there are a great many more things that need changing before they are finally adopted, and we feel that they are really not in proper form to be acted upon at this meeting. Hence, we are suggesting this method of handling it: To have them published in the JOURNAL in the form in which they will be presented to the House next summer, so that the delegates and the membership at large can study them, with the view of adopting them at the next annual meeting of the House.

PRESIDENT BERGMAN: You have heard this second recommendation of the Executive Board. What is your pleasure?

COLONEL KESLER: I move that it be approved.

DR. HENDERSHOTT: I second the motion.

DR. PERRIN: As a matter of information, I should like to know what the present method ought to be for revamping the constitution and by-laws. In the last constitution and by-laws, as published, probably unintentionally, the method for amending or revamping was omitted. I do not know, as that is perhaps official, but what is the proper method for revising the constitution and by-laws?

DR. JAKEMAN: It is merely a matter of submitting the proposed changes to the House for their consideration, disapproval or approval.

DR. PERRIN: Without laying them over for a year?

DR. JAKEMAN: This plan proposes to get them in operation by handling it this way: We approve in principle the present attempt at revision but, realizing that we have fallen far

short in view of the recommendations made by the president in his address, we feel that we should go still further before presenting them to the House. We have omitted many things that should be included.

PRESIDENT BERGMAN: There are several amendments pending that were presented at the New York meeting that will be brought up tonight for action.

DR. PERRIN: That does not answer the question. What is the procedure under our present constitution and by-laws for doing that? Will it be presented this year and acted upon next year, or any time you see fit to do it?

DR. JAKEMAN: It will be handled as any amendment; it must be presented one year and acted on the following year.

DR. PERRIN: That was left out in the last publication.

DR. JAKEMAN: Do you mean the new form?

DR. PERRIN: What was that?

DR. JAKEMAN: That is the proposed revision.

DR. MERILLAT: It is included.

PRESIDENT BERGMAN: Has your question been answered?

DR. PERRIN: It has not. I asked how the present constitution and by-laws provide for amendments to the constitution.

DR. MERILLAT: It provides for the presentation of an amendment in written form at a given meeting. The proposed amendment then will lay over until the next meeting for final vote. That is the proposal in this connection, except in a somewhat modified form. What we would like to do, if possible, is to get a revised constitution and by-laws in effect following the next annual meeting, and not require it to hold over for an extra year. Is that clear to everyone?

DR. JAKEMAN: Has that answered the question? I tried to explain it that way before, and failed.

DR. HUSMAN: When was that copy of the by-laws handed out, and where?

DR. MERILLAT: Right here.

DR. HUSMAN: When? Not at our last meeting. I might have been the only one who did not receive a copy.

DR. PERRIN: No one around here, to my knowledge, has received it.

DR. MERILLAT: There is no intention of handing them out at all. They are here. If we were going to go through the five-hour job of revising the constitution, they would be your reference. But, inasmuch as that is not going to happen, we are not distributing them—that is all. The old constitution prevails. I had these copies prepared so that in case we should go paragraph by paragraph, which would take until tomorrow morning, the document would be readily available. But, under the circumstances, we are not going to do that, and you do not need the document. Use the one you have at home. This thing that you say is not in the constitution is there.

DR. PERRIN: It possibly is, but in the published copy that I received I could not find it.

DR. MERILLAT: What did you receive?

DR. PERRIN: You are reading the provisions of the by-laws, not the constitution.

DR. JAKEMAN: The by-laws—yes.

DR. PERRIN: It says that the by-laws are to be amended exactly as the constitution is amended. Turn back to the constitution, and you will not find any place where it says how this should be done—not in the one that I have.

DR. MERILLAT: It has to be done one year ahead—there is no question about that.

DR. AXBY: Mr. President, it appears that there is some confusion. There is in my own mind, now. Is this, Mr. Secretary, a reprint of the old constitution?

DR. MERILLAT: Yes. That is a reprint of the old constitution.

DR. AXBY: Then, if that be so, it appears that there is no provision made for amending the constitution. Is that not the question raised by the gentleman?

DR. PERRIN: That is what I was asking. Of course, in reprinting, it might have been left out. I have not the copy of the one prior to that.

DR. AXBY: It would appear that the only reference made to amendments is article XX, titled "Amendment to By-laws," section 1 reading as follows: "The By-laws of this association may be amended at any annual meeting by the same procedure as provided for amending the constitution," but there is no provision made for amending the constitution. Looking hurriedly through this, I did not see it, so that seems to be the question at issue.

DR. JAKEMAN: That can easily be corrected. It is just an omission.

PRESIDENT BERGMAN: Well, the procedure as far as revision is concerned is a matter of presentation of the proposed revision of the constitution and by-laws at a given meeting, after which it will lay over for one year before it is finally enacted. The proposal here tonight is that rather than delay the matter of getting the revised constitution and by-laws into effect, so that we can promote our new program, we adopt the present constitution and the amendments that are to be presented tonight, and which may be approved or disapproved, in principle, complete the revision so that the whole revised constitution and by-laws may be printed in the November issue of the JOURNAL, and be presented for final action next year so they may be put into effect.

DR. PERRIN: Mr. Chairman, would you answer the question, then, as to the status of the recommendations of Monday night? There were some recommendations adopted by this body that, in effect, become a part of the constitution. Were those presented last year, and if so, would the secretary read the minutes of that action?

PRESIDENT BERGMAN: Do you refer to the report of the Committee on Reorganization?

DR. PERRIN: There were some recommendations adopted the other night that, in effect, would be amendments to the constitution.

PRESIDENT BERGMAN: It is proposed that those recommendations of the Committee on Reorganization, as approved the other night, be incorporated in the revised constitution and by-laws, because they were all aimed at making a working organization, and they will be in printed form in November. We shall be glad to clarify the situation. We are all interested

in the same thing, and that is to get a working constitution and by-laws under which we can carry out the expanded program proposed for this organization. Now, if you deem it advisable not to allow of expediting the thing by adopting the present constitution with the amendments and so forth in principle, and allow handling it that way, we can start all over again and carry through another year.

You see, the scope of the thing is such that it will be absolutely impossible to develop a revised constitution and by-laws at this meeting. The new officers propose to work a matter of the next two or three months and get it into form to print in the November issue. If there is any objection to that procedure, we shall hold the revision of the constitution and by-laws until the next annual meeting of the Association, after which they will lay over another year, and it will take two years instead of one to bring them into effect. Is that clear to everyone?

DR. HENDERSHOTT: Are we going to have read here this evening each of the proposed amendments to our present constitution?

PRESIDENT BERGMAN: They will be read. There are about five or six amendments.

DR. MERILLAT: I do not believe you yet understand this. There is not a paragraph in the constitution that would not need some rewording. To accomplish that in a meeting like this would require hours and hours.

DR. HENDERSHOTT: It seems to me that that is the reason we delegates are sent to the conventions. I think that if we are not interested in devoting the necessary amount of time, we should stay home and let someone else represent our state at this meeting.

PRESIDENT BERGMAN: There are several amendments that were proposed a year ago that were to be brought up and will be brought up tonight. The Executive Board is recommending, as I recall it, the approval of only one and the disapproval of the others, because they do not fit into our new proposed plan of reorganization and expansion. They were proposed a year ago, and a lot of water has gone over the dam since then.

DR. MERILLAT: You will have time to read them and study them and vote on them next year.

DR. HENDERSHOTT: There is one thing, to my mind, that is important, and that is that if we have a discussion of these things this year, each of us has an opportunity to express our opinions regarding them. After that expression of opinion, we can go back home and confer with the veterinarians whom we represent and return next year better prepared to vote on the proposals.

PRESIDENT BERGMAN: We have only to disapprove this recommendation of the Executive Board. It has been moved and seconded, and is before the House.

DR. PERRIN: I still should like to know a little more of the status of the recommendations the other night. If those were in the form of amendments, why did we vote on them?

PRESIDENT BERGMAN: Those were not in the form of amendments. Those were recommendations of the Committee on Reorganization, and

those recommendations will be incorporated into the new revised constitution and by-laws.

DR. PERRIN: Perhaps I did not get the wording of them clearly.

PRESIDENT BERGMAN: That report of the Committee on Reorganization was quite the same as any of these committee reports that have been presented. The recommendations of the Committee were approved. Therefore, the sense of those recommendations would be written into the constitution and by-laws for your further observation and approval.

DR. MERILLAT: What the doctor wants is these old recommendations of last year. That is what you are thinking about, is it not?

PRESIDENT BERGMAN: He is referring to the report of the Committee on Reorganization that was presented Monday night, which report was approved, and the various recommendations associated with it. In the process of revision those recommendations will be incorporated in proper form into the constitution and by-laws—that is, the sense of them. That is the point—the sense of them. They were not proposed as amendments to the constitution.

DR. PERRIN: Perhaps not, but according to your published constitution and by-laws, there is nothing to prohibit their becoming a part of the constitution, if you so desire, because you do not make any provision, and you adopted the recommendations.

DR. JAKEMAN: I think there is a misunderstanding here.

DR. SCHUBEL: As I understand it, that is just exactly as if you had that all written out and turned it bottom-side up on the table and said, "Here are ten or twelve pages already proposed. Do you want me to read these pages? It is all here." You are not going to put anything in there that we do not request. I can not see any objection at all to saying "Yes" on that, and letting you fellows go ahead and do the work. I do not want to argue for five hours.

DR. JAKEMAN: The House will have the right to turn down the constitution and by-laws when they are brought up next year. They will have time to study them.

PRESIDENT BERGMAN: Are you asking for a reading of the amendments proposed a year ago?

DR. PERRIN: I was asking about those recommendations that were adopted the other night. Were they presented a year ago?

PRESIDENT BERGMAN: They were not, because that was the report of the Committee on Reorganization, and there were certain recommendations there, just as any committee might present, and they were approved. They are operative now. The sense of them will be ultimately incorporated into the revised constitution and by-laws—those that belong there.

DR. PERRIN: My reason for asking that was merely that I could not find any place in your published constitution and by-laws that would prohibit those recommendations from becoming a part of the constitution, if you so desired.

DR. MERILLAT: You admit they need revision?

DR. PERRIN: Yes, absolutely.

PRESIDENT BERGMAN: The new president has asked for recognition, and by the unanimous consent of the House, I shall recognize him.

Is there any objection? Hearing none, Dr. Way will speak.

DR. WAY: Perhaps I can clarify this question in just a few words. The proposal is that the constitution and by-laws need revision, detailed revision. It is impossible to present all of the amendments that are necessary in their final form tonight. The Executive Board proposes to put these in proper form, publish them in the November JOURNAL so that you and every other member of the Association may read them and discuss them with your state associations, and have them presented next year in Washington for your approval or disapproval. You can turn them down next year, exactly the same as you would turn them down tonight, if you desire, the only difference being that if they were presented tonight, you would have twelve months to study them, and if they were presented in November, you would have about nine months to study them. That is all the difference. Next year in Washington you can turn the whole thing down, if you desire.

... Cries of "Question" ...

PRESIDENT BERGMAN: All those in favor of the recommendation, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

DR. JAKEMAN: It is recommended by the Executive Board that the student keys be approved, and their distribution be confined to the seniors in good standing.

We have a very nice-looking gold key for the students in the junior chapters, and the Board feels that it is desirable that this key be given to the seniors only, rather than to the juniors and sophomores. They recommend that the House approve the recommendation that these student keys be so handled. They are not to be given away. They are to be sold at a price of \$2.10.

DR. FRICK: I move it be approved.

DR. KRILL: I second the motion.

PRESIDENT BERGMAN: Is there anyone who does not clearly understand what this key proposition for members of student chapters is? If I may comment a little, what we are trying to do is to establish better relations with our student chapters. I tried to emphasize that point in my presidential address. It is the greatest potential source of new members, and we are trying to set up a situation in the central office whereby we can cooperate a little more closely with the student chapters and lend them some assistance. There is quite a program that we are proposing to develop to effect a better contact with these chapters and interest on the part of the students.

This proposal is nothing more or less than a plan to make available a very nice key which will be sold to them for \$2.10, and will be allowed only to the graduating seniors in good standing in their student chapters. "Good standing" means that a man must have been actively associated with his student chapter for a period of three years preceding graduation. It is just a matter of stimulating a little more student interest, and is brought to the House for approval.

It has been moved and seconded that this recommendation be adopted. All in favor, sig-

nify by saying, "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: It is recommended by the Executive Board that the following proposed amendment be incorporated in the new presentation of the constitution: Add another section to article 2 of the by-laws, to provide for the admission of junior members into active membership, under the following conditions:

A graduate of a recognized veterinary college in the United States or Canada, who was in good standing as a junior member during the second, third and fourth years of his college course and who files an application for active membership in the A.V.M.A. within 30 days of the date of his graduation, may be admitted without payment of the regular membership fee of \$5.00, provided in section 1 of article 2, but would be required to pay the dues pro rata for the balance of the current fiscal year.

This amendment was proposed at the 75th annual meeting, and is being brought up tonight for action. I might say, in connection with that, that all graduates of this year are not yet members, but have made application and we are awaiting the action of the House on this particular amendment before their names are placed on the membership roll. Are there any questions on that amendment?

DR. FRICK: I move it be adopted.

J. S. BARBER (Rhode Island): I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the amendment as presented be finally approved as presented a year ago. I might say, in a word of comment, that it means the induction of over 400 graduating seniors this year into immediate A.V.M.A. membership. All in favor of the motion, signify by saying, "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: I have here a list of amendments presented last year at the annual meeting. There are five of them, and the Executive Board recommends they be disapproved at this meeting in view of the explanation which has already been presented of the proposed change in the constitution and by-laws, whereby these amendments will not be applicable. I believe that the chairman has already explained that— that these amendments were discussed by the Board and they recommend that they be disapproved. If it is the desire of the delegates, I shall read these amendments.

The first amendment was just adopted. The second one is as follows: That section 8 of article 17 of the by-laws of the A.V.M.A. be amended to read as follows:

The Committee on Veterinary Biological Products shall consist of five members, each of whom is actively engaged in conducting research work in the field of veterinary biological products. The members of the Committee shall be appointed by the president with the approval of the Executive Board. The first committee appointed under this section shall consist of five members, whose terms of office shall be as follows: One for one year, one for two years, one for three years, one for four years, and one for five years. After the first year, the term of office for all members appointed shall be five years.

The president shall select the member to act as chairman on the committee.

PRESIDENT BERGMAN: The recommendation of the Executive Board is that this proposed amendment be not approved.

DR. KRILL: I move that we accept the recommendation of the Executive Board.

DR. HUSMAN: I second the motion.

PRESIDENT BERGMAN: You have heard the motion made and seconded that the amendment as proposed be not approved. Is there any discussion? All in favor, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

DR. WELLS (Florida): I should like to ask if the amendments that are now being read were proposals of the Executive Board, or did they come from the floor?

PRESIDENT BERGMAN: They were proposals that were presented in proper form, written form, a year ago, and laid over a year. I can not recall who presented them.

DR. BIRCH: There is one point regarding these that I wish to have clarified. Are they rejected principally because of the fact that they interfere with the present reorganization?

PRESIDENT BERGMAN: That is correct, Dr. Birch. That is the whole thing. They do not, as proposed, fit into the proposed reorganization of the constitution and by-laws.

DR. WESTMORLAND: Would it be in order to make a motion that the report of the Committee in its entirety in regard to those amendments be accepted? If it is, I shall make that motion.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: Would you like to have these proposed amendments read?

... Cries of "No" ...

PRESIDENT BERGMAN: We shall be very glad to read them.

DR. PERRIN: It will be a year before the new constitution and by-laws will be in effect, and out of fairness to those who presented these amendments, I think that we are justified in acting upon them. I do not believe it is fair to those who presented them. I did not present a single one of them, but I would like to be fair to those who presented them. They could not do any harm in there for a year. Your new constitution and by-laws will not go into effect for a year.

PRESIDENT BERGMAN: There is a motion before the house.

... Cries of "Question" ...

PRESIDENT BERGMAN: You know what the motion is. It is that the recommendation of the Executive Board regarding the disapproval of these remaining proposed amendments be approved. Is there any further discussion?

DR. WELLS: I should like to make myself clear on this thing. If these proposals were made by the Executive Board, then it would be in order for the Executive Board to ask us to disapprove them. We do not have to give any consideration to that. But, if these proposals were made by a certain group, we ought to give some consideration as to whether we should turn them down.

... Dr. Jakeman read the remaining proposed amendments ...

Amendment 1939—3

Amend article V, section 4, as may be required to read: The secretary shall be the general manager of the Association. He shall direct the entire business of the Association, including the clerical work of the Association and of the Executive Board. He shall give bond to the Association and of the Executive Board. He shall give bond to the Association in such amount as may be prescribed by the Executive Board. He shall present a written report of the activities of his office at each regular meeting of the Association and at each other time as may be directed by the Executive Board.

The secretary may act as editor of the JOURNAL and with the consent of the Executive Board may, on approval of the Executive Board, employ such editorial and secretarial assistance as the said Board may deem necessary for the conduct of his office.

Amendment 1939—4

Amend article V, section 7, paragraph L to read: It shall be the duty of the Executive Board to consider and recommend yearly to the Association concerning the selection of a secretary, who shall receive such salary and allowances as may be recommended by the Executive Board.

M—The Executive Board shall have the accounts of the secretary and treasurer audited by a qualified accountant annually or oftener, as deemed necessary, and submit annually to the Association a financial statement including inventory.

Amendment—5

Amend article 13 of the by-laws to eliminate section 1, which reads:

EDITOR AND BUSINESS MANAGER

The offices of editor of the JOURNAL and business manager of the JOURNAL may be combined and the two offices filled by one individual. Either or both said offices may be held by the secretary of the Association.

Amendment 1939—6

Amend article V, section V, second paragraph, to read: The treasurer shall pay out moneys only on vouchers countersigned by the president and secretary, excepting minor expenses of the secretary and such revolving fund as may be placed at his disposal by the Committee on Budget.

Proposal for the establishment of a special committee, to be known as the Committee on Nomenclature of Diseases and Vital Statistics of Domestic Animals, whose duty it would be to investigate this phase of veterinary medicine and begin work which would eventually culminate in a report that could be used as a basis and guide to all who wish to conform to accepted and recognized nomenclature of diseases and give aid and assistance to the matter of collecting vital statistics.

DR. STUBBS: It was found to be much more satisfactory for this governing board of three to

set the salary of the secretary rather than the Executive Board; is that correct?

DR. JAKEMAN: It is set by the Executive Board—not by the Board of Governors.

DR. STUBBS: We passed it the other night—that the committee of three set the salary.

DR. JAKEMAN: All the work of the Board of Governors is subject to the approval of the Executive Board. In that one matter, the selection of a secretary, the vote which you passed Monday night was to the effect that it be left to the Executive Board to select an executive secretary and an assistant executive secretary.

PRESIDENT BERGMAN: Is there any further discussion? If not, all in favor of the motion, signify by saying, "aye"; contrary, "no." The motion is carried, and it is so ordered.

By vote of the House at the last meeting, the matter of the meeting place for 1941 was set as a special order of business for 10:00. It is now 10:09. We shall proceed with that particular part of it.

DR. JAKEMAN: It is recommended by the Executive Board that the meeting place for 1941 be Indianapolis, Ind.

DR. AXBY: Mr. President, I move the acceptance and the approval of the recommendation.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: Is there any discussion? You have heard the motion. Is everyone familiar with the motion? If so, all in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: The Executive Board recommends the approval of the following proposed resolutions for cooperation between the American Veterinary Medical Association and the American Animal Hospital Association, and that if approved by the House of Representatives, the Board of Governors be instructed to sign the resolutions for the A.V.M.A.

... Dr. Jakeman read the proposed resolutions ...

Proposed Resolutions for Joint Adoption by the American Veterinary Medical Association and the American Animal Hospital Association

BE IT RESOLVED that any dog food approved by the unanimous opinion of the Scientific Advisory Council (now consisting of George R. Cowgill, Walter C. Russell, H. H. Mitchell, B. W. Fairbanks* and Agnes Fay Morgan) and subsequently approved by the Committee on Foods of the American Animal Hospital Association (all of whom are members of the American Veterinary Medical Association), as long as it shall remain approved shall be granted an insigne or statement to the following effect: "Tested and Approved as Represented on Container—American Animal Hospital Association in Cooperation with the American Veterinary Medical Association."

BE IT FURTHER RESOLVED that the American Animal Hospital Association agrees to protect, keep and save harmless the American Veterinary Medical Association from any and all

claims, demands, actions, or causes of action of every kind, character, nature and description whatsoever, by reason of the right herein granted to the American Animal Hospital Association.

The American Animal Hospital Association also agrees to direct the Committee on Foods to prepare an annual report in duplicate, one copy to be forwarded to the Executive Board of the American Veterinary Medical Association as an informative report.

BE IT FURTHER RESOLVED that these resolutions shall be effective when signed by the accredited officers or committee of the respective associations, subject to termination by either association upon one year's written notice. (To be duly in force when signed by executive officers of each association.)

DR. HENDERSHOTT: I move that we approve the recommendation.

D. E. SISK (Illinois): I second the motion.

DR. BARNETTE: It looks to me like we are going a long way without carefully determining how we shall proceed in endorsing the handling of dog foods and the testing of dog foods. I do not see why our association should begin at this time to endorse dog foods. I really think a matter of this kind should be left over at least for one year for consideration.

DR. BIRCH: Mr. Chairman, I can heartily endorse the sentiments of the last speaker. I do not believe that we are ready at the present time to take action of that kind.

DR. AXBY: This strikes me as an enterprise presented to us quickly, that has modifiers attached to it, and dangers. What does it mean if we do that, and someone violates it? Where is the penalty? How does one get his disapproval or approval removed? In the final analysis, how does it work? This is new to me. I do not know. I am in a quandary about it all. It strikes me that this has dynamite in it, as well as compliance with a justified request, perhaps. I certainly agree with the suggestion of the gentleman that it should be held for a year, that we might have time to think it over.

DR. JAKEMAN: I might say that it is possible that I read this hurriedly, and that the point was missed. This does not provide for our testing dog foods. It is, in substance, a resolution whereby the American Animal Hospital Association shall continue in the work which it has been carrying on very efficiently for several years. We, the parent organization, grant them the right to use the name of the American Veterinary Medical Association on their stamp of approval. In return, they agree to protect the A.V.M.A. in every respect. It is a proposal of one-year duration. That is, it can be changed in one year.

I might say that the Board has not presented this proposition without giving it consideration from various angles. It has been studied carefully for some time. Conferences have been held with members of the American Animal Hospital Association and the Board, therefore, felt justified in recommending it to you. But, if the dele-

*Resignation accepted; new member being elected.

gates feel that it is a matter that requires further study, then, of course, it should receive further consideration.

DR. HENDERSHOFF: I do not know whether or not everyone here is acquainted with this procedure. I do know that there has been during the past year a lot of correspondence between the A.V.M.A. office and the secretary of the A.A.H.A. regarding the testing of dog foods.

I think that the group in the American Animal Hospital Association are preëminently doing a good job. I can see how having the name of the A.V.M.A. affiliated with the work they are doing will redound to our credit. I do not see any place where we need, in this agreement or in this resolution, to be fearful that we are going to be brought into a suit in court regarding whatever may take place in the course of the next year. The resolution reads that the A.A.H.A. agrees to protect the A.V.M.A. against all law suits or claims or judgments or controversy.

Dr. Bower of Kansas is here, I think, and he is a member of the Committee on Foods. He is also one of the members of the executive committee. He is much better informed on what they are doing than I. I wonder if it would be the pleasure of this body to listen to Dr. Bower's explanation of exactly what they are doing so that we may vote intelligently on this thing.

PRESIDENT BERGMAN: Dr. Bower, would you care to speak on this proposal? Is there any objection to Dr. Bower's speaking? I hear none.

DR. BOWER: I would like to call Dr. LaCroix to the floor. He is prepared to give this explanation. Since I am a member of the executive boards of both associations, I prefer that you hear from Dr. LaCroix, if it is all right with the chair.

PRESIDENT BERGMAN: Unanimous consent will allow Dr. LaCroix to speak. Will you come forward, please?

DR. LACROIX: If there are any questions I can answer, perhaps that is the best way I can serve you.

DR. BIRCH: Who makes the examinations?

DR. LACROIX: All food testing thus far has been done at the University of Illinois.

DR. BIRCH: Is there any payment for that?

DR. LACROIX: Yes.

DR. BIRCH: That is paid for by whom?

DR. LACROIX: The examination of the food or the testing of the food is done at the University of Illinois and paid for by the producers of such food.

DR. BIRCH: There is no central agency anywhere for that work?

DR. LACROIX: Yes, there is.

DR. STUBBS: How many different manufacturers have asked for examinations?

DR. LACROIX: Four—five products.

DR. BARNETTE: What are the charges?

DR. LACROIX: I am not sure on that point. I prefer not to guess.

DR. HUSMAN: Are the samples presented by the manufacturer, or are they picked up at random through the regular channels of trade?

DR. LACROIX: They are picked up at random, or picked up from warehouses or retail storage places.

DR. STUBBS: Did all of these five that were

submitted to you meet with your approval?

DR. LACROIX: Yes. There were no foods submitted for testing that were really bad.

DR. STUBBS: If a company were to submit a product that fails to meet the test, what would you do?

DR. LACROIX: We would not give them the seal to be used. They would be turned down.

DR. AXBY: That would in no way prevent or prohibit them from selling it?

DR. LACROIX: We have no police authority.

DR. AXBY: Have any firms voluntarily submitted food?

DR. LACROIX: Yes, all whose foods have been tested.

DR. AXBY: How many examinations do you make—only one examination for each sample?

DR. LACROIX: One biological test is made annually. Surprise tests are made—that is, tests without the knowledge of the producer. The nature of this test is not indicated—its exact nature—and the details are not publicized.

DR. BARNETTE: I should like to know something about the cost.

DR. LACROIX: I am sorry, I can not tell you.

DR. STUBBS: Have these foods been of the canned or dry variety?

DR. LACROIX: Both. I wish to ask Dr. Bower or others here of the Association who might be able to give an exact figure as to the cost. I regret that my memory does not serve me on that point. Dr. Bower says that the charge is around \$500 for each sample.

DR. BOWER: That is the exact cost. There is no profit.

DR. BIRCH: Does the University of Illinois assume any responsibility for this, or is it a private individual connected with the University?

DR. LACROIX: The University of Illinois sponsors all of this work. It is done by Professor Mitchell, in his department. We may employ other universities.

DR. PERRIN: Would they care to publish the relative food values of those products that they approve?

DR. LACROIX: As yet, we have no provisions for publishing results beyond the fact that foods inspected have or have not met the test. It is the purpose here simply to do something to distinguish between foods that meet a certain nutritional requirement and foods that do not. We do not propose to determine the nutritional value of foods with regard to all of the essential factors that may be contained in such foods. Rather, it is a biological test known as the paired feeding method, devised by Professor Mitchell. This follows a chemical analysis and, in addition, tests are made upon dogs for palatability and laxation. The Mitchell paired feeding test is made upon rats of known breeding.

DR. BIRCH: These payments are made to the University of Illinois?

DR. LACROIX: They are.

DR. WISNICKY: Can you state the reasons why the name of the American Veterinary Medical Association is desired to be added as a sponsor of this approval?

DR. LACROIX: In view of the fact that the American Animal Hospital Association has been

credited with having done work that is useful, a public service to the dog owners of this country, it is felt that a greater benefit would redound to those whose foods are stamped or are to be stamped as meeting the requirement, the minimum standard, let us say, if the certificate of approval bears the name of the A.V.M.A. as well as that of the A.A.H.A. In other words, it is a statement that the American Veterinary Medical Association sees fit to endorse the work done by the American Animal Hospital Association on this project.

DR. WISNICKY: Will it cost the dog-food producer more to get the approval with this added support?

DR. LACROIX: This has begun as a non-profit venture, and there is no intention, that I know of, to make it profitable for anyone excepting to the owner of animals, to enable that owner to distinguish between dog food that bears this stamp, which indicates that such food meets certain minimum nutritional standards, and the food that does not meet such standards. That, however, does not classify or distinguish between foods that have not been tested.

DR. STUBBS: This \$500—is it paid by the manufacturer?

DR. LACROIX: We have no money to pay that. That is a cost that is borne by the manufacturer or producer.

M. B. STARNES (Texas): Dr. LaCroix, in the report of the executive committee, assurance is given that the American Veterinary Medical Association will be protected in the event of legal involvement. What assurance can be given by the American Animal Hospital Association that our association will be adequately protected? In other words, does the cost of the analysis or the payment by the manufacturing company include sufficient money to post a bond guaranteeing the protection of the American Veterinary Medical Association in the event that this association is involved in legal entanglements?

DR. LACROIX: It would be unfair and unwise, I think, to put that cost on the producer. The American Animal Hospital Association can protect this organization at the present time to the extent of several thousand dollars in cash and would, I believe, very readily post any reasonable bond to safeguard further the interests of the Association. After all, every member of the A.A.H.A. is first a member of the A.V.M.A.

DR. WELLS: Do you believe that the work the animal hospital association has done already with the four brands that it has tested has tended to elevate the standards of all dog food?

DR. LACROIX: I do, and it is the opinion of the president of an organization that is distributing very large quantities of dog food, of good quality, I think, that we have done good work—that it has been a stimulus to those who are producing good food and, in his opinion, a deterrent to those who would produce the other kind in larger quantity.

DR. WELLS: Is that concern one whose food has been tested by the American Animal Hospital Association?

DR. LACROIX: The one I am quoting, that food has not been tested.

DR. BIRCH: Is it your opinion that we shall be called upon regularly to pass on these dog foods?

DR. LACROIX: If I understand your question, it might be answered that, as we know, there is no firm whose food has been tested that has any idea of discontinuing.

DR. BIRCH: Will others begin, and will we be expected to pass on them?

DR. LACROIX: As I understand this resolution, there is no intent to push the work or responsibility for doing the work upon the A.V.M.A., but rather, it is intended that the work be continued as it is done now, or in a similar fashion.

E. E. WEGNER (Washington): You say that you continue to make yearly tests. Do these manufacturers pay each year the cost of these yearly tests?

DR. LACROIX: They do.

DR. WEGNER: It costs about \$500 a year?

DR. LACROIX: That is right.

DR. PERRIN: Would it not be of more value to everybody concerned if certain standards were established for these dog foods? As I read these labels that are put out and compare them with corollary advertisements, it seems as though it is a meaningless thing. It would not have to pass very much of a test of any kind if they did not make any statements on their labels that they could not fulfill, and most of those that I have seen—which, of course, is not many—do not make very many statements unless they have something to sell.

DR. LACROIX: Dr. Perrin, it is not the intention of the American Animal Hospital Association to attempt to tell any producer how to make a good dog food. We feel that we shall have enough to do if we can assist the dog owner to distinguish between food that is meeting a certain standard—let us say a minimum standard which we have set up—and food that does not.

If you will notice, also, the producers of foods bearing the seal on labels of foods sold make no wild claims regarding the palatability or nutritional quality of such foods. We do not permit such claims.

DR. PERRIN: There are no standards set, and there are no standards published by anybody. Nobody knows what to meet.

DR. LACROIX: The standard is simply that which is—that is a technicality. I do not feel quite capable of expressing definitely what that standard is. That is decided upon by those who do the testing at the University of Illinois, and is studied, criticized, and agreed upon by and between the members of the advisory council. I think that the standard required is that the food shall be of such nutritional quality as to make possible growth and lactation of the animals fed upon such food.

DR. BIRCH: The Association has no machinery for checking on the thing that we are requested to approve, has it?

DR. LACROIX: We can not duplicate the work of the University of Illinois. We have not the means, and neither have we the laboratory facilities nor the man power.

DR. BIRCH: Is it your opinion that we could measurably add to the force behind their rec-

ommendations so long as we are in that condition?

DR. LACROIX: If I understand your question correctly, I would answer it by saying "yes," if you want to spend the money to duplicate the work. Then, you might as well set up your own laboratory and do it directly. This could be done, and we have considered doing it when we have 15 or more foods on test.

DR. MOORE: Everyone knows how many different brands of dog food there are on the market. We are not going to say anything derogatory about any food, and neither is the animal hospital association. That is, I am going to assume that much. The hinge seems to be as to whether this association will be penalized, or sued—they would not be penalized, but might be sued—for any dog food that does not bear this stamp.

In the City of New Orleans, there are two dog foods on the market that are fit to feed to a dog, and the rest of them are not fit to feed to a pig. Now, I am going a long way when I say that. I do not anticipate any suit. The animal hospital association does not say that. They simply put their stamp of endorsement on the food that they know is, as Dr. LaCroix says, meeting the requirements of their body.

I think it is a wonderful move, and it has been laid over for long enough for anybody to think it over. Many of us have a sort of lymphatic lethargic condition, and prognostication is a terrible condition. This matter has laid over for a year, and that is sufficiently long. If you do not know anything about this dog food by that time, you are going to have a terrible task finding it out next year. I believe that this thing should be acted upon.

The stamp on there simply recommends—it does not recommend. It simply says that the food is fit to feed. Now, as Dr. LaCroix said, that is going to make the man who makes a dog food make it better if he wants to stay in business. If he goes out of business, that is nobody's concern but his own. I fail to see why this thing should be held over for another year. I know that we have in the City of New Orleans a dog food that is put up—probably good food, but I do not think it is. It is muskrat. Many muskrats are caught in the vicinity of New Orleans every year. Incidentally, we have the greatest production of any state in the Union, and they do not want the meat. They have taken that meat and made a dog food out of it. Every man here, I think, knows that they put stuff in there that should not be put in the can for food.

I think that this is a step in the right direction, and I believe that we should take a vote on it tonight and enforce the animal hospital association's proposition.

DR. BIRCH: As a privilege, may we have a show of hands on those in the House of Representatives who knew at the time they came here that this matter was to come before the House?

PRESIDENT BERGMAN: Dr. Birch asks for a show of hands of those who knew that this was to come before the House of Representatives. (Seventeen raised their hands.)

DR. STUBBS: I should like to ask a question.

Just how long ago should we have known about that? Was it yesterday, or the day before, or last year?

PRESIDENT BERGMAN: Dr. Jakeman, the Executive Board has been discussing this thing for—

DR. STUBBS: (interrupting): Granted that it was yesterday, I can vote "yes," but granted that it was the day before, I can not vote "yes."

PRESIDENT BERGMAN: For about a year and a half, we have been discussing this. We have had various conferences at different times with representatives of the animal hospital association.

DR. WISNICKY: I am in accord with the idea that the system initiated by the animal hospital association is one that is good, but I have two points in connection with this resolution that I should like to mention. The first is that if the American Veterinary Medical Association is to lend its name in connection with this project, we should have some voice in determining certain things that are decided in connection with this project, and second, it is my thought—at least I feel—that the A.V.M.A. is the big organization, and I dislike to think that we are going to put our name in a secondary position.

PRESIDENT BERGMAN: Is there further discussion?

DR. PATTON: May I have the consent of the House to say a few words?

PRESIDENT BERGMAN: Dr. Patton asks for the unanimous consent of the House to speak briefly on this question. What is your pleasure? Is there any objection? If not, the chair will grant it.

DR. PATTON: Now, gentlemen, this is a matter that I can speak on from first-hand experience. I have had a lot of experience in this particular field. The objections I find to the Association's going on record as endorsing any dog food, or giving its approval, are several. First, what does this seal of approval mean? Dr. LaCroix has said that the seal of approval states that the package is telling the truth, that it is as stated. Do we want to go on record as endorsing something that is assumed will tell the truth?

In the first place, there is no need for that seal. In the second place, I should like you to consider what the standards are and who sets these standards and what control you are going to have over the American Veterinary Medical Association as to whether or not these manufacturers are living up to those standards. I think there is a lot of dynamite in the American Veterinary Medical Association's endorsing anybody's food or giving any seal of approval, because it has not in the past, as far as those who are giving seals are concerned, meant much.

Take the case of the present seal, which is the Good Housekeeping seal. What does that seal mean? Then, ask yourself this question: Why is it, if this seal is going to be so good, that there are only three manufacturers who have availed themselves of the opportunity of taking on this seal? Why do we have to go out of our own profession and add a lot of names to this advisory committee? What does the advisory committee do, and who is actually

testing this food? Is it the students in some laboratory? There is a lot of food for thought here, and I ask you to look into this matter before you give your final opinion.

Again, gentlemen, I say that there is a lot of dynamite in this dog-food business, and I hope that you will not get into this thing very hazily, but will give it a lot of mature judgment. I should like to see you have a committee, a veterinary committee, that would sit and appraise any laboratories by logical evaluation. Give those people a seal if they present the evidence that is satisfactory to you. Do not charge them for it, and take it away, if necessary. You sit in the saddle if you do not take the money. Thank you.

DR. STUBBS: Have you been testing any dog foods yourself?

DR. PATTON: I have been testing dog foods for eight years.

PRESIDENT BERGMAN: How do you wish to vote on this question—record vote?

DR. LACROIX: May I reply very briefly? Dr. Patton has questioned the integrity and the ability of the University of Illinois. I leave it for you to pass on that. Other universities will necessarily be required to do some of this work, if very much more is to be done soon, because the University of Illinois has stated to us that it can not carry a large volume of this kind of work and do it as it should be done. In other words, I think that the University of Illinois realizes the importance of this particular job and is capable of continuing to render efficient service in that line. We are obliged to take money for this testing business. If the A.V.M.A. feels able to endow a committee to do the work and charge nothing for the service, that is for the A.V.M.A. to decide.

No students are given responsibility for doing this work and passing upon it. A digest of the protocols of all of the work is made by one man, Dr. Fairbanks. He earned his Ph.D., I think, at the University of Illinois. I feel that he is a qualified nutritional worker.

The advisory committee checks all work that is submitted to that committee by Dr. Fairbanks. The standard I have indicated is that set at the University of Illinois, which prescribes that the food must meet nutritional requirements sufficient for growth and reproduction of the animals to be fed.

Finally, we have been testing food for quite some while now, toying with that dynamite, in other words, and we are still living.

PRESIDENT BERGMAN: The secretary will call the roll by states. There is a motion made and seconded that the recommendation of the Executive Board be approved.

DR. BIRCH: May we have the exact motion read?

... The stenotype reporter read back the motion.

... Assistant Executive Secretary Ingmand called the roll, and the vote was as follows:

State	Yes	No
Alabama	2	1
Arkansas	1	1
California	1	4
Colorado	1	2
Connecticut	1	2

District of Columbia	1	1
Florida	2	1
Georgia	2	1
Illinois	3	2
Indiana	1	2
Kansas	2	1
Kentucky	2	1
Louisiana	1	1
Maryland	2	1
Massachusetts	2	2
Michigan	2	1
Minnesota	3	1
Mississippi	1	1
Missouri	1	2
Nebraska	1	2
New Jersey	2	1
New York	1	4
North Carolina	2	1
Ohio	3	1
Oklahoma	2	1
Oregon	2	1
Pennsylvania	3	1
Rhode Island	1	1
South Carolina	1	1
Tennessee	2	1
Texas	2	2
Utah	1	1
Vermont	1	1
Virginia	2	2
Washington	2	1
West Virginia	1	1
Wisconsin	1	2
Wyoming	1	1
Veterinary Corps	2	1
U. S. B. A. L.	2	1

PRESIDENT BERGMAN: The vote is 46 "yes," and 32 "no." The chair declares the resolution adopted.

DR. JAKEMAN: The Executive Board recommends to the House of Representatives that the present executive secretary, Dr. Merillat, and the present assistant executive secretary, Dr. Ingmand, be employed under the temporary titles of executive secretary and assistant executive secretary, respectively, for a period of one year, unless otherwise ordered by the Board of Governors, in view of the fact that the constitution and by-laws are being rewritten.

DR. GILLMANN: I move it be adopted.

DR. AXBY: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the resolution be adopted. All in favor signify by saying "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: The Executive Board recommends the following policy for adoption by the American Veterinary Medical Association with regard to rabies:

In the control of rabies we should consider the fundamental principles of the control of any infectious disease, which vary according to the disease, the mode of transmission, the method of infection, the avenues of entrance into the infected host, and various other important questions relative to the transmission of infectious diseases. It seems that we are, in the parlance of the golf game, "pressing the game" by forcing the use of vaccine. The American Veterinary Medical Association might be on much safer and more tenable ground if they were to go to the public and say that the Association could recommend an effective method of control of rabies if it were turned over to the veterinary service, where it belongs.

There is no rabies in England, in Australia, or in most of the countries on the Continent. Rabies has been effectively controlled there, and it *could* be effectively controlled in this country. The veterinary profession has eliminated from this country contagious pleuropneumonia of cattle, foot-and-mouth disease, tuberculosis, and is rapidly controlling equine encephalomyelitis and Bang's disease, and has a definite program for the control of mastitis.

If the health officials of this nation would turn the control of rabies over to the proper veterinary authorities, which would be the U. S. bureau of animal industry, because it is a national problem, and to the veterinary service, they could and would control the disease in this country. We of the veterinary profession would be on much more tenable ground if we put it to the public in that way than if we presented the rabies problem to a public that is not in a mood to accept it.

While we are not able to say that vaccination is 100 per cent efficient, it is undoubtedly effective to a considerable degree and could be used as an accessory agent of control, but fundamentally, we should adhere to the fact that the disease can be controlled and will be controlled if it is turned over to the veterinary service and the proper authorities qualified and prepared to execute an efficient control program.

PRESIDENT BERGMAN: You have heard the recommendation of the Executive Board.

DR. HUSMAN: I move its adoption.

DR. POELMA: I second the motion.

PRESIDENT BERGMAN: Is there any discussion? All in favor signify by saying "aye"; contrary, "no." The motion is carried.

DR. JAKEMAN: It is recommended by the Executive Board that the majority report of the special Committee on Rabies be tabled and the Committee be continued for further research and study.

DR. AXBY: I move the adoption of the recommendation.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the report of the Committee on Rabies be tabled and that the Committee be continued for further study of the problem. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

DR. JAKEMAN: That completes the report.

PRESIDENT BERGMAN: Tom Sigler, who is very much tied up with the clinic to be held tomorrow, has asked permission to present his report, as representative of the Horse and Mule Association of America, so that he may retire. We shall grant him that permission.

... T. A. Sigler read his prepared report. [To be published.]

PRESIDENT BERGMAN: Dr. Sigler, the secretary's office wants to apologize to you for not having published your report of last year. The report of the New York meeting was published very late, in April, and the material was compiled in a hurry. When we went to press, your report could not be found. It was probably lost during a meeting. Hence, at this meeting we are going to be a little more careful and shall see that our stenographer gets every piece of paper, and, therefore, be sure that when

publication is started, everything will be together.

For your information, I will say that Dr. Sigler is the representative of the advisory board from this organization to the Horse and Mule Association of America. You have heard his report. What is your pleasure?

DR. KRILL: I move it be accepted.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the report be adopted. All those in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

We shall now hear the report of the Committee on Food Hygiene, which will be presented by Dr. Fisher, since Dr. Hardenbergh has left.

E. E. WEGNER (Washington): I move that this paper be read by title and published in the JOURNAL.

DR. POELMA: I second the motion.

PRESIDENT BERGMAN: Is there any discussion? If not, all those in favor, signify by saying, "aye"; contrary, "no." The motion is carried. ... The report of the special Committee on Food Hygiene was read by title only. [To be published.]

PRESIDENT BERGMAN: Now, we have the report of the Committee on Tuberculosis, the report of the Committee on Bang's Disease, and Interstate Shipment of Live Stock by Truck.

Does anyone have Dr. Zimmer's report? That is ruled out. Dr. Wight will then present his report.

A. E. WIGHT: Our committee prepared a rather short report. I think it is unnecessary to read it. There is nothing in it that is at all revolutionary, or anything like that. We wind up by saying: "The best results in animal tuberculosis eradication can not be obtained unless there is a proper application and interpretation of the tuberculin test; and while this fact has been mentioned in previous reports of the Committee on Tuberculosis, it is deemed advisable to call attention to it again in closing this report."

PRESIDENT BERGMAN: Dr. Wight recommends this his paper be received and read by title and printed in the official journal.

DR. WESTMORLAND: I move that this report be accepted.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the report be accepted. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

... The report of the special Committee on Tuberculosis was read by title only. [To be published.]

PRESIDENT BERGMAN: We shall now have the report of the Committee on Bang's Disease. We will hear from C. R. Donham, chairman of that committee.

C. R. DONHAM: It would take between twelve and fifteen minutes to read this report, which is signed by all of the members of the Committee. Do you want me to read it, or do you want me to suggest that it be read by title?

... Cries of "title".

DR. DONHAM: I recommend that the Commit-

tee be continued. That is not included in the report.

PRESIDENT BERGMAN: All in favor of having the report read by title and continuing the Committee signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

The report of the special Committee on Bang's Disease was read by title only. [To be published.]

PRESIDENT BERGMAN: Is Ward Giltner, representative of the American Association for the Advancement of Science, here?

Dr. Giltner is not present. Dr. Gillmann, have you anything to offer?

DR. GILLMANN: I have a list of some of the work that we have done. I just wanted to tell you that on November 21, we organized our committee and did a little work between then and last Saturday. That is all the report that we have to make. The results you all know.

Dr. Gillmann handed in his prepared report. [To be published.]

DR. BIRCH: Mr. Chairman, if it is in order, I move a vote of thanks to Dr. Gillmann's committee for the work they have done and the entertainment they have provided.

DR. FRICK: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that a rising vote of thanks be given to Dr. Gillmann, chairman of the local committee, for the very fine work they have done in the organization of this meeting. All in favor, rise.

The audience arose and applauded.

DR. GILLMANN: On behalf of the Committee, I thank you.

EXECUTIVE SECRETARY MERILLAT: I want to say that the Memphis meeting has brought a number of new members unprecedented in the history of the Association.

PRESIDENT BERGMAN: Is there any further business to come before the House? If not a motion to adjourn is in order.

DR. BARNETTE: Have the resolutions come up?

PRESIDENT BERGMAN: I beg your pardon. Where is the chairman of the Committee on Resolutions?

Dr. Wegner, would you like to present the resolutions?

Dr. Wegner read resolution 1.

Resolution 1

WHEREAS, the veterinary profession of the United States has the responsibility for protecting our domestic live stock from diseases that attack animals individually and collectively as well as controlling diseases transmissible from animals to man, and

WHEREAS, in organizing our veterinary personnel, for the purpose of accomplishing the above results, we have divided our efforts by assigning many full-time veterinary officers to the task of expressing or controlling certain diseases that endanger the well being of men and animals.

WHEREAS, there are areas in our country where competent veterinary services are not to be found because there is insufficient financial remuneration to induce practitioners to locate in these areas, and the result is that our live-

stock producers suffer accordingly and empirics are induced to invade these areas to the detriment of the livestock industry.

WHEREAS, many of these localities would support a competent veterinary practitioner if it were possible for him to receive the money that is spent for veterinary services in said localities, and

WHEREAS, the veterinary practitioners are competent to render the required professional services in disease suppression and eradication as well as the treatment of sick and injured animals, and

WHEREAS, it should be the purpose of the veterinary profession to organize itself in such a way as to render the best possible service to the people of the livestock industry,

THEREFORE, be it resolved that the A.V.M.A. in furthering the interests of the livestock producer, the general public, and the veterinary practitioner, with a desire to extend the usefulness of the veterinary profession, do recommend that as far as possible, general routine regulatory veterinary sanitary police work be delegated to the veterinary practitioners in their localities, under supervision of the present state and federal agencies.

(Signed)

A. T. Kinsley, *Chairman*,
W. W. Dimock,
S. E. Hershey,
E. E. Wegner,
I. D. Wilson.

DR. WEGNER: I move that this resolution be adopted.

PRESIDENT BERGMAN: You have heard the first recommendation of the Committee on Resolutions.

DR. PERRIN: I second the motion.

PRESIDENT BERGMAN: It has been moved and seconded that the first resolution of the Committee be adopted. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

Dr. Wegner read resolution 2.

Resolution 2

WHEREAS, it has become quite evident that the considerable majority of veterinarians, particularly those in private practice, who attend veterinary association meetings, are desirous of visiting the technical exhibits presented at such meetings, and

WHEREAS, most such veterinarians find it impossible to inspect the technical exhibits as completely as they desire without absenting themselves from a part of the sessions of the convention and thereby fail to obtain all possible benefit from the programs presented, and

WHEREAS, the technical exhibitors who support the various association meetings, including that of the A.V.M.A., fail to obtain the full benefits from such exhibits for the reasons above assigned, and

WHEREAS, in numerous conventions of similar character, notably in the medical and hospital fields, the provisions hereinafter set forth have been found of much benefit to the host organization, the membership and registrants at the meetings, and the exhibitors alike, therefore

BE IT RESOLVED, That the Veterinary Exhib-

ors' Association proposes to the American Veterinary Medical Association, the American Animal Hospital Association, and to all sectional and state associations whose meetings are extensively attended and supported by the member firms of this association, that their programs be so arranged as to permit intermissions of from 30 to 45 minutes during each morning and afternoon session, the time during such intermissions to be devoted to reviewing the technical exhibits; such time to be in addition to the periods preceding the opening of the morning and afternoon sessions, which has proved not to be adequate for a review of the exhibits by all those in attendance.

The adoption of the above resolution was moved by C. E. Fanslau and duly seconded and unanimously adopted by the Veterinary Exhibitors' Association.

DR. WEGNER: I move the adoption of resolution 2.

PRESIDENT BERGMAN: You have heard this resolution. Is there a second?

H. S. CAMERON (California): I second the motion.

PRESIDENT BERGMAN: You understand the sense of this, I presume. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

... Dr. Wegner read resolution 3.

Resolution 3

WHEREAS, the Peabody Hotel through their coöperative efforts have played no small part in making the 76th annual meeting of this association a most successful one, and

THEREFORE, be it resolved that we highly commend the Peabody Hotel for their efforts and offer them our earnest appreciation of their part in making this meeting a complete success.

DR. WEGNER: I move the adoption of resolution 3.

PRESIDENT BERGMAN: Is there a second to this resolution?

J. E. GREER (Virginia): I second the motion.

PRESIDENT BERGMAN: The motion has been made and seconded. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

... Dr. Wegner read resolution 4.

Resolution 4

WHEREAS, the 76th annual meeting has been so successful in the arrangements of its program which was so graciously prepared and executed, and

THEREFORE, be it resolved that we offer our complete thanks to the local committee for making the Memphis meeting one of the most successful meetings of this association, both to the efficiency and economy in the handling of this meeting.

DR. WEGNER: I move the adoption of resolution 4.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: The motion has been made and seconded. All in favor signify by saying "aye"; contrary, "no." The motion is carried and it is so ordered.

... Dr. Wegner read resolution 5.

Resolution 5

INASMUCH as the prevention and control of rabies is a public and animal health problem of international importance,

AND, as almost 20 years of mass usage has demonstrated beyond reasonable doubt the value and field efficiency of rabies vaccine as a logical prophylactic measure;

THEREFORE, it is the opinion of the American Veterinary Medical Association that we approve the use of this biological product by properly qualified veterinarians as a logical and sensible rabies control measure,

AND, that we further recommend accepted sanitary police methods as an essential adjunct in the prevention and control of this virus-borne infection of animals and man.

DR. WEGNER: I move the adoption of resolution 5.

PRESIDENT BERGMAN: It seems to me that this resolution is contrary to that just passed, as recommended by the Executive Board. I believe that the chair should rule it out of order.

DR. WEGNER: I am not sure that it conflicts in any way with the report of the Executive Board. As I remember, they recommended that certain measures be taken for the control of rabies and recommended that that work be done by the veterinary profession, but this is a resolution proposing that there is some value, as indicated by field experience, in rabies vaccine, and it is only giving it what many men believe is its just dues.

DR. BARNETTE: I do not see how that resolution is out of order.

PRESIDENT BERGMAN: We are checking it to see if it is.

DR. JAKEMAN: I believe that the only place where there might be any conflict is in the wording of the last paragraph of the recommendation of the Board which reads: "While we are not able to say that vaccination is 100 per cent efficient, it is undoubtedly effective to a considerable degree, and could be used as an accessory agent of control, but fundamentally we should stick to the program that the disease can be controlled and will be controlled if it is turned over to the veterinary profession and the proper authorities qualified and prepared to execute an efficient control program."

PRESIDENT BERGMAN: Will you read the resolution again, Dr. Jakeman, so that we will get the full import of it?

... Dr. Jakeman read resolution 5.

PRESIDENT BERGMAN: That resolution is recommended by the resolutions committee. Is it signed by all members of the Committee?

DR. WEGNER: I think it is.

G. N. WELCH (Vermont): I second that motion, and I would like to add, Mr. President, that in Vermont we have a lot of faith in rabies vaccine, because in 1927 we cleaned up quite a bad outbreak and have had only two cases since.

DR. KRILL: I feel that the resolution which was passed a while ago, the report of the executive committee, is sufficient to cover this question. I do not feel that we should pass this last resolution, and I make that motion.

PRESIDENT BERGMAN: It is a matter of voting down the resolution.

DR. PERRIN: I move the resolution be referred to the executive committee.

PRESIDENT BERGMAN: The resolution was seconded.

DR. PERRIN: This has not been acted upon by the Executive Board, has it?

PRESIDENT BERGMAN: These resolutions were brought directly to the House.

DR. WELLS: Would it not be the sense of these two resolutions that while we admit it is not 100 per cent effective, that it does have some value and should be recommended?

PRESIDENT BERGMAN: How do you wish to vote on this resolution—by state?

DR. BIRCH: If we are to vote on this resolution, I wonder if it would be acceptable to reword it so that the emphasis is placed on the sanitary measures and the vaccination as an adjunct to those sanitary measures? Then it would be precisely the same as that which the Executive Board gave us.

DR. BARNETTE: I believe that the general idea here is to get across something that will state that we have not been fooling with rabies vaccine for 17 years and just now found out that there is something wrong, and that we are willing to quit it just because there has been some laboratory work done which shows that in all cases the results would not satisfy. I do not think there is a practitioner here who has not used rabies vaccine. I do not believe that there would be very many here who would say that rabies vaccine has not some value, or the contact between the owner of the dog and the veterinarian, or that the method that has been used would not do some good where there are outbreaks. If there should be conflicting wording in the resolution and the recommendation which has been adopted from the Executive Board, those things can be ironed out by the executives of our office.

PRESIDENT BERGMAN: Is there any further discussion?

DR. BIRCH: I asked if the resolutions committee would accept that change. The question has not been answered.

DR. WEGNER: I would not have authority to speak for the Committee on Resolutions. It seems to me that there is no very great conflict there. One puts the emphasis on the tweedledee and the other on the tweedledum.

PRESIDENT BERGMAN: Are you ready to vote? All in favor of the adoption of this resolution signify by saying "aye"; contrary, "no." We shall have to vote by roll call.

Dr. Ingmand called the roll, and the results were as follows:

State	Yes	No
Alabama	2	.
California	.	4
Colorado	2	.
Connecticut	.	1
District of Columbia	1	.
Florida	2	.
Georgia	2	.
Indiana	.	2
Kansas	2	.
Louisiana	1	.
Maryland	.	2
Massachusetts	2	.
Michigan	2	.
Minnesota	.	3
Mississippi	1	.

Missouri	2	.
Nebraska	.	2
New York	.	4
North Carolina	.	2
Ohio	.	3
Oklahoma	2	.
Oregon	.	2
Pennsylvania	.	3
Rhode Island	.	1
South Carolina	1	.
Tennessee	2	.
Texas	.	2
Utah	1	.
Vermont	1	.
Virginia	2	.
Washington	2	.
West Virginia	1	.
Wisconsin	.	2
Wyoming	.	1
Veterinary Corps	2	.
U. S. B. A. I.	.	2

... The report of the A.V.M.A. representative to the National Research Council was read by title only. [To be published.]

PRESIDENT BERGMAN: While they are checking the outcome of the vote on the resolution, we shall listen to the report of the Committee on Policy.

... B. T. Simms read the prepared report. [To be published.]

PRESIDENT BERGMAN: You have heard the report of the Committee on Policy. What is your pleasure?

DR. AXBY: I move the acceptance of the report.

DR. GILLMANN: I second the motion.

PRESIDENT BERGMAN: Is there any discussion? If not, all in favor, signify by saying, "aye"; contrary, "no." The motion is carried.

The chair will present the report on the result of the vote. On the resolution, there were 33 "yes," and 36 "no." The resolution is not approved.

Is there any other business to come before the House?

DR. PERRIN: What formality would this body have to go through to get these reports published in advance of the annual meeting? Of course, I appreciate the fact that some of these reports of committees can not be handled that way, but a lot of them could be prepared and mimeographed and distributed to the membership at least two weeks or a week, at least, before the annual meeting. I believe it would expedite matters considerably. Is it within the province of this body to order it done, or would a recommendation have to be—

PRESIDENT BERGMAN (interrupting): You are referring to reports coming up for consideration at a given meeting of the House?

DR. PERRIN: That is right.

PRESIDENT BERGMAN: The executive secretary should express an opinion on that particular thing, and he is not here right now. I do not know whether it would be possible or not. Some of these reports are prepared very late. It might be possible in some cases.

DR. WEGNER: I think that there is very much good food for thought there, because we take up a lot of time here just listening to the reading of reports that are nothing more than interesting scientific reading. We can read them when we get home. After all, when one hears

a thing read just once, one is hardly in a position to act intelligently a minute afterwards. If it could be so arranged, we would give these things more mature consideration and save a lot of our time.

PRESIDENT BERGMAN: When I presented what purported to be a presidential address, I bore down rather heavily on the matter of a complete study by the Executive Board on the matter of conducting meetings of the Association. There is very definite chance for improvement just along the line that you are suggesting. If you would like to leave that as a suggestion to consider along with the other plans that we are perfecting in connection with making these meetings more attractive and worth while and of more value to the membership, we shall take it as a suggestion, or Dr. Way, you will, won't you? and make every effort to carry out as far as possible this suggestion made. Is that satisfactory?

DR. PERRIN: Yes.

PRESIDENT BERGMAN: There is no question but that the conduct of these meetings can be much improved and made of greater value to those in attendance. There is going to be a very definite study made of that particular matter. We made a little progress this year in the matter of the preparation of abstracts for all of the sectional meetings, and we had abstracts of all the papers presented at the general session this morning. That is the practice in the majority of the larger scientific societies, and there are a lot of improvements that we can make.

A motion to adjourn is in order.

DR. AXBY: I move we adjourn.

DR. IVENS: I second the motion.

PRESIDENT BERGMAN: All in favor, signify by saying, "aye"; opposed, "no." The motion is carried, and we stand adjourned, to reconvene immediately in the closing general session of the convention.

... The meeting adjourned at 11:45 p. m.

Thursday Evening Session

August 31, 1939

The meeting convened at 11:45 p. m., H. D. Bergman presiding.

PRESIDENT BERGMAN: This final general session of the convention will please be in order.

There seems to be no unfinished business, and we shall therefore proceed with the induction of officers. I shall ask Drs. MacKellar and Cameron to conduct the newly elected president to the platform.



Cassius Way

A member of the Association since 1909, President Way of New York City is known throughout the East for his skill in equine practice, particularly the ailments of horses incidental to breeding and reproduction. Dr. Way holds a B. Agr. degree from the Connecticut Agricultural College, 1899; an A.B. from Cornell, 1905; and a D.V.M. from Cornell, 1907. He was born in Gilead, Conn., on July 28, 1881. He was married to Mary Hamilton on March 23, 1908.

... Dr. Way was conducted to the platform, and the audience applauded. . .

PRESIDENT BERGMAN: Cassius Way, eminent veterinarian, willing and faithful worker in the interest of the veterinary profession and my close personal friend of many years, it is with genuine pleasure that I induct you into the presidency of the American Veterinary Medical Association and present you with this gavel, indicative of office. It is an honor you richly deserve. Your qualifications, often demonstrated, are such as to assure the association membership that the responsibilities of this high office will be met with dignity and distinction during your period of service.

PRESIDENT WAY: Dr. Bergman, members of the American Veterinary Medical Association: All I can say is that I again thank you for the high honor which you have bestowed upon me, and with your support, your suggestions, and your constructive criticism the executive branch of the Association will endeavor during the ensuing year to do everything possible to carry on the work which has been organized by this splendid committee during their efforts for the past two years, and carry on to a more successful and useful and better association.

I thank you.

PRESIDENT BERGMAN: We shall now proceed with the induction of the president-elect, the vice-presidents, and the treasurer.

... The newly-elected officers who were present were conducted to the platform, and were inducted into office. . .

PRESIDENT WAY: Is there any further business to come before the meeting? If not, I declare the 76th annual convention of the American Veterinary Medical Association adjourned *sine die*, to meet in Washington in 1940.

... The meeting adjourned at 12:05 a. m. . .

ABSTRACTS OF CONVENTION PAPERS

Modification of the Distemper Virus*

IT IS NOW recognized that canine distemper is due to a filtrable virus, as was first demonstrated by Carré in 1909. Although Carré's work was subsequently eclipsed by investigations on *Bacillus bronchisepticus*, Laidlaw and Dunkin later established beyond question the virus nature of distemper. Green and Evans have shown that the virus of distemper may be accurately identified by the cytoplasmic inclusions found in epithelial cells. They have also shown that foxes, minks, and racoons suffer epizootics of distemper caused by a virus that is fundamentally identical with the canine distemper virus isolated by Laidlaw and Dunkin and now used generally in the preparation of commercial vaccines.

Distemper, as it appears in various species of susceptible animals, maintains a relatively virulent character for unrelated species. The virus isolated from natural cases of distemper in dogs or foxes usually produces fatal infections in ferrets. However, a study of many natural strains of distemper from various-source animals shows marked variations in virulence of the disease for different species. It has been found in these investigations that the distemper virus is capable of modification by prolonged passage through a single species, so that its virulence is lessened for other susceptible but unrelated species. Serial passage of the distemper virus through ferrets or minks greatly reduces its virulence for foxes and dogs. The process of modification can be carried to such a degree that the virus, while extremely virulent for ferrets, produces a harmless infection in foxes.

Below is given a summary of the experimental modification of distemper virus by serial passage through ferrets, in which successive tests showed a gradual decrease in the virulence of the virus for foxes. All foxes used were less than 6 months of age.

*By R. G. Green; presented before the second general session.

By a rotation of age groups in successive years, differences in susceptibility at various ages less than 6 months were eliminated in the course of these experiments. The foxes were injected with dosages of ferret-spleen virus approximating 1 cc. of a 0.5 per cent suspension. The disease was identified continuously throughout the ferret series and was identified in the foxes, when death occurred, by demonstration of the specific inclusion bodies and by reinoculation of ferrets.

Virulence of Natural Distemper Virus for Foxes.—Twenty-five young foxes injected subcutaneously with a distemper virus obtained from an epizootic in foxes suffered a mortality of 84 per cent, 21 of the animals succumbing to distemper.

One to Ten Serial Passages.—Two groups of 10 foxes each were injected with 4th and 10th ferret-generation virus, with losses of 5 and 4 animals, respectively. The total mortality was 45 per cent.

Eleven to Twenty Serial Passages.—Three groups of 10 foxes each were injected with virus of 14, 15, and 18 serial passages, respectively. Eight animals died, a total mortality of 27 per cent.

Twenty-one to Thirty Serial Passages.—Twenty-five pups were injected with 21st generation virus. Three, or 12 per cent, of the animals died. Among 56 foxes injected with 27th generation virus, there were 5 losses, a mortality of 9 per cent. The average mortality for the entire group was, therefore, 10 per cent.

From this point on, larger groups of foxes were used for single tests.

Thirty-nine Serial Passages.—Inoculation of 50 foxes resulted in 4 deaths, a mortality of 8 per cent.

Fifty-three Serial Passages.—Fifty foxes were inoculated and 4 deaths occurred, a mortality of 8 per cent.

There was definite evidence that in the

above tests natural distemper gained access to the groups and that some of the deaths, at least those produced by the 53rd generation virus, were due to accidental infections with the natural distemper virus. In adjacent pens, control foxes, which had not been inoculated, came down with distemper at the same time that the disease appeared in the vaccinated foxes. It was therefore decided to inject the virus into a large group of silver foxes in a unit free of distemper.

Fifty-four Passages.—Five hundred ranch foxes 4½ months old were injected with the 54th generation virus. The animals in this group exhibited no signs of illness after inoculation. Three of the foxes died during the next 90 days, but none of the three could be shown to have died of distemper. The total mortality for this group was 0.6 per cent during the 90 days following injection of the live virus.

Test of Fifty-fourth Passage Virus on Ferrets.—Simultaneously with the inoculation of 500 foxes, an injection of the 54th generation ferret virus was made into ten ferrets. All of the ferrets were killed *in extremis* on the eighth day with infection typical of that caused by the highly virulent passage virus in the homologous animal.

When tested with suitable controls, foxes that had previously been injected with modified virus exhibited a high degree of immunity to a distemper virus virulent for foxes.

During modification by ferret passage, the distemper virus goes through a continuous and gradual change in its pathogenic properties for an unrelated but susceptible species such as the fox or the dog. On successive serial passages through ferrets the virus is by degrees converted into one that is no longer accurately described as the distemper virus. This change is more than the decrease in virulence described above. A distemper virus passed serially through ferrets for approximately 25 generations still produces a mortality of about 10 per cent in young foxes, but the disease in foxes is no longer recogniz-

able clinically as distemper. The animals show symptoms for only a few hours and die suddenly with necropsy findings that may easily be confused with those of fox encephalitis. The inclusion bodies present, however, are those of distemper. Upon further passages, the sudden deaths become fewer and, finally, the virus seems almost nonpathogenic for foxes. Nevertheless, a definite infection is produced by the virus.

The modification of the distemper virus here described seems analogous to the change in the smallpox or variola virus as it is transformed by animal passage into the vaccinia or varioloid virus used in the immunization of human beings. It is suggested that the mild infection produced by the modified distemper virus be referred to as distemperoid and that the modified virus be called the distemperoid virus.

Lesions of Gossypol Poisoning in Dogs Fed Cottonseed Meal*

RAW COTTONSEED meal was used in the ration as the source of protein at the rate of 27 per cent. Dogs received as much of the feed as they would consume within a short time—approximately one-half pound twice daily. Normal gains were made even though the dogs apparently had to acquire a taste for the ration. Nine to twelve months expired before symptoms of posterior incoördination of several days' duration occurred. Stupor or somnolence and lethargy were observed about a day prior to death. The dogs were in good physical condition and died suddenly. No pathogenic organisms were isolated and the possibility of other infectious agents was precluded by the fact that dogs separated by a 2-inch mesh fence on either side of the pen remained healthy.

The gross changes were as follows: There was a marked hydrothorax and moderate hydropericardium; edema; hemorrhage, and small pneumonic areas at the ventral apical lobes of the lungs. The blood was dark and its viscosity had increased. Atony, hypertrophy, edema, and areas of

*By John L. West; presented before the Section on Research.

degeneration constituted the heart changes. Moderate ascites, congestion, and hyperplasia of the mesenteric lymph glands were observed. Enlargement, mottling, congestion, and areas of hemorrhage characterized the liver. Large suggulations and possible slight fibrosis of the spleen were noted. The walls of the gastrointestinal tract were edematous and thickened, and there were numerous ulcerations or erosions of the fundic portion of the stomach and the first 3 feet of the intestine, with a hemorrhagic exudate. The surface of the kidneys was mottled, with areas of degeneration and infarction. There were no visible macroscopic changes in the nervous tissue.

Gossypol apparently exhibits an endo-theliotoxic action. The microscopic changes were: Chronic hemorrhagic hepatitis; chronic tubulo-glomerulo nephritis; fatty degeneration, and fibrous replacement of the myocardium; extensive edema, hemorrhage, and small pneumonic areas in the lungs; edema, catarrhal hemorrhagic exudate, with degeneration of the surface epithelium and secreting tissue of the stomach and intestines; and large, patchy areas of demyelination, axonic fragmentation and swelling of the peripheral nerves. A swelling of several cells, irregularity and partial loss of Nissl granules constituted the central nervous changes.

Skin Lesions in Animals Accompanying Deficiencies in Vitamin B Complex, Particularly Vitamin B₆*

RESEARCH during the last five years has given evidence that besides vitamin B₁, other nutritional factors are present in liver, rice bran and yeast. Of these factors, usually summarized as B complex, three chemical entities have been isolated: Riboflavin, nicotinic acid and vitamin B₆. The newest member of this group, vitamin B₆, was isolated in 1938 and synthesized for the first time in 1939 by Folkers and Harris in the Merck research laboratories.

Vitamin B₆ is needed by rats and dogs

for normal growth or development, and there are already strong indications that it is also required by pigs and humans. Most of the research with vitamin B₆ has been carried out on rats. Young rats maintained on a synthetic diet, supplemented with B₁, riboflavin and nicotinic acid, cease to gain weight after three to six weeks and develop characteristic skin lesions, the so-called rat acrodynia. The paws become swollen, edematous and denuded; ulcers frequently develop around the snout and on the tongue. The ears thicken and become scaly. The animals lose weight and die within one to three weeks after developing these symptoms. Administration of vitamin B₆ relieves the symptoms promptly, and the rats gain in weight.

We have studied the skin lesions and the process of healing after administration of B₆ in histological sections. In the stage of severe depletion the epithelial layers, especially of the ears, had increased in thickness. Hyperkeratosis was extreme. Necrosis and polymorphonuclear leukocytic infiltration were found, especially at the tips of the pinna and at the toes. Inter-cellular edema was striking in the epithelium and was found also in the subcutaneous tissues. The hair follicles and the sweat glands were atrophic.

The effect of a single dose of 100 micrograms of vitamin B₆ on these histopathological changes of the skin was striking. Twelve hours later the number of mitotic figures increased. After 24 to 48 hours the edematous state was barely discernible, and in three to ten days all ulcerations, except the extensive ones, were healed. The hyperkeratotic tissue on the ears peeled off in the form of plaques. The atrophic appearance of the sweat glands had disappeared.

The marked response of these deficiency symptoms to crystalline vitamin B₆ shows that the skin lesions described above are to be attributed to the lack of this vitamin. Other skin symptoms found frequently in rats maintained on a synthetic diet, which are not influenced by vitamin B₆, must be attributed to other unknown factors of the B complex.

The requirement of the rat for normal

*By Klaus Unna; read into the records by title.

growth was found to be approximately 10 micrograms of vitamin B₆ per day. Comparisons between crystalline vitamin B₆ isolated from rice bran and synthetic vitamin B₆ gave identical results in a large series of rats.

Some Nervous Disturbances in Dogs*

FRIGHT DISEASE, hysteria, or running fits is a condition in dogs characterized by a nervous - running - howling complex which may or may not be accompanied by epileptiform seizures and with which, in its later stages, is often associated muscular incoördination and posterior paralysis. The names given to this condition (fright disease, hysteria, or running fits) are quite descriptive of the prominent symptoms of the disease.

Our studies with dogs indicate that the syndrome is ushered in with hysteria or fright symptoms and that these are closely followed by epileptiform fits, muscular incoördination, and frequently terminate in posterior paralysis. The cause of this condition is a diet deficient in vitamin B. We have been able to classify these symptoms into three groups, namely: Hysteria or fright; epileptiform fits or convulsive seizures; and muscular incoördination or posterior paralysis.

We have also been able to classify these symptoms in accordance with the specific curative effect of various fractions of the vitamin B complex. Our research to date would indicate that hysteria, fright, and running fit symptoms, together with the initial symptoms of fits and posterior paralysis, can be controlled by vitamin B₁, whereas in cases of longer standing other fractions of the B complex are required—most likely the vitamin B₆ and filtrate factors—to bring about complete recovery of the fit and paralysis symptoms.

In the film we are about to show, you will see the following: The syndrome as it develops and the recovery from all three groups of symptoms (hysteria or fright,

epileptiform seizures or convulsions, muscular incoördination or posterior paralysis) following the administration of vitamin B₁ hydrochloride (thiamin).

In the showing of this film we would like to call your attention especially to dog 86, for he appears in two experiments. In the first experiment you will see exhibited the extreme nervous symptoms associated with the convulsive seizures and muscular incoördination and the recovery in the early stages from all of these by vitamin B₁ therapy. In the second experiment you will observe the complete absence of nervous symptoms when this dog is fed the same diet plus vitamin B₁. You will observe, further, that the symptoms of convulsive seizures, muscular incoördination, and posterior paralysis, which appeared much later and were allowed to progress much further, required in addition to thiamin, other fractions of the vitamin B complex for complete recovery.

From these experiments we postulate that hysteria, fright disease, or running fits is basically a vitamin B₁ avitaminosis and, further, that certain epileptiform seizures and posterior paralytic conditions in dogs—especially when associated with so-called fright disease—are a vitamin B complex avitaminosis.

TREATMENT

Inasmuch as vitamin B₁ appears to prevent and cure all of the nervous symptoms (nervous, running, howling complex) of fright disease, we recommend the administration of vitamin B₁ hydrochloride (thiamin) subcutaneously or thiamin chloride orally in a dosage of 500 to 1,500 International units daily for several days.

The animals should then be placed on an adequate diet. This treatment appears, also, to control the early symptoms of convulsive seizures, muscular incoördination and posterior paralysis associated with fright disease. However, in cases of longer standing (two to four weeks) it appears that in addition to vitamin B₁, other fractions of the vitamin B complex are required, especially vitamin B₆ and the filtrate factor.

*By John W. Patton; presented before the second general session.

Vaccination of Dogs with Modified Distemper Virus*

PREVIOUS investigations by the senior author have shown that the virulence of the distemper virus may be greatly modified by animal passage. A distemper virus isolated from dogs that have the natural infection will usually produce a virulent disease in animals as diverse as a fox and a ferret. If such a virus is passed serially through ferrets for 50 passages, or virus generations, it will develop a high, fixed virulence for ferrets but greatly reduced pathogenic properties for foxes and dogs. Green and Carlson are reporting the successful vaccination of more than 50,000 silver foxes with a distemper virus modified by passage through ferrets. In this paper are reported experiments in the use of modified distemper virus for the vaccination of dogs.

The modified virus used for the experimental vaccination of dogs had been passed serially through ferrets from 53 to 56 times. The virus in its final form was spleen collected from ferrets *in extremis*, and immediately frozen. Most of the vaccines for dogs were made with suspensions prepared directly from this frozen material. Other inocula were made with desiccated virus. The dosage of the modified virus was in all cases 0.5 cc. of 0.5 per cent spleen suspension. In no instance was any killed virus or protective serum used before or with the injection of live virus.

Isolated groups of dogs, ranging from one to 14 in number and totaling 114 animals, have now been injected with this modified virus without undue reaction, although the virus on frequent, and often simultaneous, tests showed extremely high virulence for ferrets. The dogs inoculated were mongrels, Springer Spaniels, and Golden Retrievers. Twenty-three were small puppies only 3 weeks old when injected; 76 were 4 to 16 weeks of age; 10 were about 8 months old; and 5 were adults. No difference in severity of general response had been noted in the different age groups. No severe reactions following the inoculations

have yet been encountered. Most, but not all, of the puppies, however, have shown unmistakable signs of illness: partial loss of appetite, some conjunctivitis, looseness of the bowel, and listlessness for a day or two. Many of the dogs have shown a single reaction, about the 6th or 7th day, while others have shown a secondary reaction from the 12th to the 14th day.

A litter of 8 Golden Retriever puppies injected with dehydrated virus on the 21st day after birth were intensively studied. Seven of the 8 had a slight fever about the 7th day and failed to gain weight over a period of from 2 to 4 days. All the puppies were then free of fever and gained weight until about the 14th day, when all had a slight fever and gained no weight for several days. By the 3rd week after vaccination most of these puppies were expelling worms. They were dewormed on the 21st day and again on the 28th day. On the 24th day, 6 of the puppies developed from one to 9 pustules on the abdomen, although at this time they were generally thrifty, gaining weight rapidly, and were very active. As a complication of the pustules, and probably partly as the result of injury, one of the puppies developed an abscess. With the exception of a temperature of 104.2° F. in this puppy previous to lancing of the abscess, the highest temperature noted was 103.6°, and this was maintained for only one day. The mother of the dogs, 10 months old, showed a more severe reaction than any of the puppies. She had a slight fever on the 5th and 6th days and a temperature of 104.8° on the 11th day, which gradually dropped to 102.2° on the 16th day. She ate well throughout this period, except on the 11th day.

This group of puppies were tested for immunity to distemper 78 days after vaccination. They were given subcutaneously 0.5 cc. of 0.1 per cent commercial, live, frozen, dog-spleen virus as a test of immunity. Temperatures of the puppies were taken for 18 days following the inoculation but no fever was evinced. One puppy did show a rise of 2° in temperature on the

*By R. G. Green and F. S. Swale; presented before the second general session.

7th and 8th days as a result of an infected wound received in a fight with litter mates, but its temperature was again normal on the 9th day. All puppies appeared entirely immune. A control ferret developed distemper after the usual period of incubation.

Another litter of 3-week-old puppies were inoculated with fresh modified virus. This group of 10 Springer puppies did not show any marked or noticeable reaction other than the formation of pustules on the abdomens of 3 of the 10 on the 9th day. Temperatures were taken for a period of 18 days, during which they remained normal. The mother of this litter had a slight fever of 1.2° on the 11th day, which was probably due to a foot injury. Her temperature was again normal on the 13th day.

No reactions were seen in the rest of the 23 puppies injected when 3 weeks old. The only development of pustules seen was in this group of very young dogs. In the animals in which pustules occurred, the general reaction was not more marked than in the others. During the time the puppies had pustules they were playful and ate well.

Although not a single severe reaction was seen among 109 puppies under fair to good conditions of care and feeding, four deaths resulted from virulent secondary invaders in a test conducted on 25 puppies in a highly infected sales kennel that handles low-priced dogs. This group represented a classical example of the influence of unsanitary conditions and malnutrition. It becomes obvious that the modified virus can be used as a vaccine only for dogs that are in fair health and nutrition and have some protection from sick and convalescent dogs carrying virulent microorganisms.

Practical use of a modified virus by Green and Carlson for the vaccination of the silver foxes shows that such a virus is safe for use in that animal and results in an immunity sufficient to control completely distemper outbreaks on fox farms. The modification of the distemper virus by serial passage through ferrets offers an entirely new tool in the vaccination of dogs against distemper. The reduction in viru-

lence effected by animal passage appears to be a dependable character of the distemper virus. From our results thus far, general vaccination of dogs by the judicious use of a single dose of modified distemper virus would seem to be a possible development.

Canine Coccidiosis*

DURING the spring and summer of 1938 a total of 320 dogs were examined for coccidial infection over a period of nine months. The fecal examinations were made according to Sheather's sugar-floatation method as modified by Benbrook and Bourne.

The major portion of the animals were derived from the surgical and medical wards, while the remainder were composed of boarders and strays, the latter being brought in for destruction. Most of these dogs were examined at least every other day during their hospitalization period. Fourteen experimental animals were divided into two groups and kept in strict confinement for a period of eight weeks. Precautions were taken to prevent cross infection between dogs and contamination of utensils during the time the fecal examinations were being made.

Seventy-nine per cent of all animals checked harbored coccidial sporocysts or oöcysts, while 21 per cent of them were negative.

Thirty-two per cent of the samples showed 1 to 5 sporocysts in each high power field (+). Twenty-three per cent showed 5 to 25 sporocysts per high power field (++) . Nine per cent showed over 25 sporocysts and oöcysts per high power field (+++).

The parasites were identified as belonging to the genus *Isospora*, the species being *felis*, *rivolta*, and *bigemina*. No *Eimeria canis* were found.

Two experimental groups of animals composed of six and eight dogs were kept under strict surveillance for four and six weeks and their feces were examined daily. Eleven of them were found to harbor coccidia, while three were negative. None of

*By Frank X. Gassner; presented before the Section on Research.

the dogs showed any symptoms of coccidiosis. The organisms found were usually in the sporocystic stage.

Three animals received by the mouth two doses each of one-fourth gr. of arecoline hydrobromide to break the chronic stage and to obtain oöcysts in the feces. In each case the oöcysts were found in the second fecal passage eight to ten hours after treatment. Two days later the feces again contained only sporocysts.

All animals were sacrificed. Some were in the acute stage, due to the arecoline, while others were in the chronic stage. In each case the entire digestive tract was examined. All showed more or less injected areas in the mucosa, thickened walls due to an increase of connective tissue elements and congestion of the serosa, especially in the animals which received arecoline a short time before autopsy.

The intestinal tract was transected every 3 inches from the pylorus to the cecum and a small piece was removed, fixed and sectioned in paraffin for histological study. The remainder of the intestine was opened and some of the intestinal contents was saved for examination.

The intestine was washed thoroughly with tap water to remove all adhering material and then scraped. The scrapings were suspended in physiological solution of sodium chloride, shaken well, centrifuged, and the supernatant fluid discarded. After repeating this process three times the sediment was checked microscopically. In each case the villi, denuded of epithelium, showed coccidial organisms in the tunica propria in various stages of development. The lower part of the jejunum and the ileum contained the greatest number of parasites. None were found in the anterior part of the duodenum or the cecum.

It was found that the *Isospora bigemina* always matures fully in the subepithelial tissue of the villi, while the *I. rivolta* only occasionally does so. The single sporocyst was found in great numbers, as well as the oöcyst just in the act of releasing its pair of sporocysts. The histological study of stained paraffin sections corroborated the above findings.

Two dogs which were considered to be free from coccidia, after repeated fecal examinations, were found to harbor a few of these parasites in the tunica propria of the intestinal villi.

Effects of Intravenous Injection of Certain Salts of Sodium, Calcium and Potassium on Intestinal Tonus and Motility in the Dog*

TWO OBJECTIVES were followed in this experimentation, namely: A study of the effects of different ions upon intestinal tonus and motility, and a study of the influence of varying dilutions of sodium chloride on the intestine, to indicate whether a detailed investigation would be practical.

Two types of experimental procedures were followed. Type 1 required an anesthetized animal and involved a recording of the respiratory movements, of the blood pressure from the carotid artery and of the intestinal movements as revealed by a balloon placed within the small intestine. Type 2 provided for a recording of respiratory movements and a recording of intestinal movements as revealed by a jacket placed about an exteriorized skin-covered loop of the small intestine. A method new in the study of intestinal motility was employed, and it was based on an operation first performed by Biebl but improved by Bors and Polans. This consisted in bringing a section of intestine to the exterior in the right flank and enclosing it in a strip of skin in such a manner that a metal jacket containing a rubber balloon could be attached so as to encircle the skin-covered intestine. The balloon was connected by rubber tubing to a recording tambour, so arranged as to write upon a smoked drum.

While the wound of the operation was healing, the dog was trained to lie quietly on the table.

The effects upon intestinal musculature of sodium chloride in various percentages of strength, ranging from 2.5 to 12.5 per cent, were studied. A 5 per cent solution

*By E. A. Hewitt; presented before the Section on Research.

of sodium citrate was used, as well as a 5 per cent solution of sodium bicarbonate and a 1 per cent solution of calcium chloride. The effect of a 5 per cent solution of calcium gluconate was studied. The salts of potassium included potassium chloride, 5 per cent solution, and potassium bicarbonate in 5 per cent strength.

CONCLUSIONS REACHED FROM STUDIES

Solutions of sodium chloride stimulate the intestinal musculature. The first injections of small amounts stimulate intestinal motility primarily. Subsequent injections of larger amounts of sodium chloride solution stimulate intestinal tonus but suppress motility somewhat.

The quantity of sodium chloride injected rather than the percentage of strength of the solution appears to be the factor stimulating the intestinal musculature. The response of the intestine varies in proportion to the amount of the salts injected.

Large amounts of hypertonic solutions of sodium chloride administered intravenously are relatively nontoxic to the circulatory and respiratory systems.

An increase in tonus is the first and most persistent response of the intestine to an intravenous injection of sodium citrate. Intestinal motility is stimulated moderately by sodium citrate. A bradycardia and slowing of respiration result from large injections of sodium citrate.

The sodium ion appears to be instrumental in producing a stimulation of intestinal musculature. Sodium chloride and sodium citrate both stimulate the intestine, but citric acid and a solution of hydrogen chloride gas do not affect the intestine. Therefore, it appears that the citrate and chloride ions do not stimulate the intestine. The sodium ion appears to be the only remaining factor and seems to be responsible for the stimulation of the intestinal musculature.

Lang's solution is a very effective agent in stimulating both intestinal tonus and motility. However, it is slightly toxic to the respiratory and circulatory systems of anesthetized dogs. Lang's solution appears

to stimulate the intestinal musculature by virtue of the sodium ions present.

Sodium bicarbonate stimulates intestinal tonus and motility more effectively than any of the solutions used. The bicarbonate produces little or no effect on the respiratory and circulatory systems.

Calcium chloride does not stimulate the intestine as much as do the sodium salts but the effects persist longer. Considerable danger of heart block accompanies the intravenous injection of calcium chloride.

Calcium gluconate stimulates the intestinal musculature more than sodium chloride. Boric acid, which is used to increase the solubility of calcium gluconate, apparently has no effect on the intestine.

The respiratory and circulatory systems are not altered significantly by the intravenous injection of calcium gluconate.

Potassium chloride and potassium bicarbonate appear to depress the intestinal musculature. The former is exceedingly toxic to the heart.

Streptococcic Infections in Dogs*

YOUNG PUPS were not available for virulence tests until several months after the isolation of the streptococcus previously referred to as *Streptococcus canis*. Intraperitoneal and subcutaneous injections and feeding of broth cultures proved harmless, except in the case of one pup, which also showed a rather heavy roundworm infestation. This streptococcus, therefore, either had lost its virulence or it was an opportunist which infected hosts rendered susceptible by some predisposing cause. Streptococci were found to be the cause of an outbreak of tonsillitis in nine pups and two older dogs, all in one kennel.

Cultures made from abscesses (not post vaccination abscesses, as in an earlier investigation) yielded streptococci in most cases. A moribund pup (a few days old) suffering from acid milk was chloroformed and immediately examined bacteriologically. *Escherichia communior* (hemolytic) was isolated in pure culture from the liver and

*By H. J. Stafseth; presented before the Section on Research.

spleen. This organism also was obtained from the lungs, which, in addition, yielded a Gram-positive coccus. Swabs made on the same day from the vagina of this pup's mother also yielded cultures of hemolytic *E. communior*, as well as a diphtheroid and a *Neisseria*. Thus, it seems possible that more than one type of infection may pass under the name "acid milk."

Specific and Nonspecific Intestinal Diseases of Swine*

ENTERITIS as a herd disease of swine is second only to hog cholera in its importance to the swine industry. The cardinal intestinal disease, necrotic enteritis, is a major problem in almost every neighborhood of the Corn Belt. It may be aptly compared both in its cause and lesions to the devastating outbreak of human typhoid that once swept the human populace of this country. As in the human disease, necrotic enteritis also leaves carriers which are a factor in spreading the disease to new premises, especially through community sales and newly purchased breeding stock.

Control of the disease hinges on early diagnosis and full coöperation with local veterinarians, both as regards sanitation and treatment.

Among the other intestinal diseases that play havoc with America's pig crop are white diarrhea of suckling pigs—a condition that must be controlled by sanitation and proper feeding; coccidial enteritis, a parasitic infection that is spreading rapidly in many sections; hemorrhagic dysentery of feeder swine; and the nonspecific intestinal diseases, due to such factors as toxic foods, salt poisoning and excessive or faulty feeding of irritating mineral mixtures.

Inasmuch as enteritis may occur as a lesion in some of the specific, contagious diseases of swine, such as hog cholera, erysipelas and anthrax, the necessity of technical knowledge in the differential diagnosis of these troubles is self-evident. In fact, so confusing may be any of the vari-

ous swine diseases that a confirmation of the diagnosis by a bacteriological laboratory is often an essential.

Death Losses in New-Born Pigs*

DEATH losses in new-born pigs present a serious problem for many hog growers. Studies of these losses have shown that they are frequently associated with subcutaneous edema, particularly along the ventral side of the neck, and enlargement and increased friableness of the liver. Microscopically, the liver shows degenerative fatty infiltration, and the kidneys show parenchymatous degenerative changes which are mainly albuminous.

The results of feeding experiments indicate that the ration that the sow receives during the gestation period greatly influences the death rate in new-born pigs. When sows were fed a good quality of animal protein throughout the gestation period, the average death loss of pigs during the first week after birth was 11 per cent. When only grain and mineral were fed to the sows during the gestation period, the death loss was 44 per cent during the first week after farrowing.

A Blood Picture in Hog Cholera†

HEMOCYTOLOGICAL studies on the blood of cholera-affected swine have shown very specifically that a definite leukopenia occurs in this disease. Decreases in the numbers of leukocytes equal to 30 per cent and more over the preinfection values have been observed in a great many cases. Significant quantitative cell differences are found to occur approximately 24 hours before any appreciable increase in the body temperature is noted, and about 72 hours before any other clinical manifestations develop. The differential leukocyte counts usually reveal a relative lymphocytosis, although this is seldom very marked. The cellular changes are generally most pronounced in cases of

*By L. P. Doyle; presented before the Section on Research.

†By H. C. H. Kernkamp; presented before the Section on Research.

*By Frank M. Wilson; presented before the Section on General Practice.

cholera that are not complicated by extensive inflammatory lesions or by parasites. A comparatively large number of swine have been used in these studies. With few exceptions, all cases have been produced artificially with known hog-cholera virus.

A Bacteriological Study of the Aerobic Flora Occurring in Pneumonic Lungs of Swine*

THE LUNGS from 204 swine submitted for autopsy were subjected to bacteriological and gross pathological examinations. For culturing various areas of the lungs two media were used—liver-infusion blood agar, a modification of the blood medium used by Spray (1922), and lactic acid glucose agar, to determine whether budding fungi were present (Tanner, 1928). While culturing the lungs, the usual precautions were taken to prevent contamination.

Thirty-eight of the 204 lungs were apparently normal and from one lung in this series a streptococcus was isolated which corresponded to those of one group of streptococci from pathological lungs. Forty-seven out of all of the lungs examined showed various pneumonic lesions, but no bacteria were isolated. From the remaining 119 pneumonic lungs, 153 isolations of bacteria were made. In 76.5 per cent of these isolations, or 117 times, microorganisms occurred alone or in combination with others of the same genus. Isolations of bacteria in combination with different microorganisms were 36 in number, or 23.5 per cent of the total. The bacteria isolated were grouped on the basis of morphological, cultural and physiological characteristics.

Gram-positive streptococci were isolated 67 times, 64 cultures being of the alpha type and three of the beta type (Brown, 1919). The alpha streptococci were divided arbitrarily into four groups on the basis of their reactions in the fermentable media. Gram-positive diplococci were isolated in ten instances and, although their fermentation characteristics and other

physiological reactions were not entirely alike, they were placed in one group for convenience. One Gram-positive staphylococcus was isolated which occurred in combination with a streptococcus in one lung. The Pasteurellae were divided arbitrarily into two groups of 24 and 20 cultures on the basis of their fermentation characteristics. Eleven cultures of Gram-negative rods, for the most part inactive in the fermentable media, were placed in the genus *Alkaligenes*. A miscellaneous group of 20 Gram-positive and Gram-negative rods showing no uniformity in physiological characteristics were considered to be contaminants.

Most of the microorganisms were injected intraperitoneally into mice. The streptococcus, diplococcus and staphylococcus cultures were relatively nonpathogenic for mice. Over one-half of the Pasteurellae and about one-third of the *Alkaligenes* and miscellaneous Gram-positive and Gram-negative rods were pathogenic for mice.

Agglutination tests were employed on three groups of the streptococci and on the diplococci. Most of the strains of these two microorganisms showed serological relationship within the groups from which the antisera had been prepared. The results of agglutination tests on the Pasteurellae were unsatisfactory from the standpoint of correlating the serological relationship of the various cultures.

The streptococci and Pasteurellae were associated with the greatest variety of diseases. Hog cholera, lungworms, roundworms, infectious enteritis and pneumonia were the diseases with which the various microorganisms were most frequently associated.

The presence of colonies of moulds and *Actinomyces* upon the two media used for primary isolation of microorganisms varied but little among the three groups of lungs, apparently normal and pneumonic, and, therefore, little if any significance can be attached to their presence. Yeasts or yeast-like fungi were not found in any of the primary isolations.

In this investigation pneumonia in swine occurred more often as a secondary than as a primary condition. In frequency of oc-

*By Frank Thorp, Jr., and F. W. Tanner; presented before the Section on Research.

currence the following genera and groups of microorganisms were isolated: streptococci, Pasteurellae, miscellaneous Gram-positive and Gram-negative rods (probably contaminants), Alkaligenes, diplococci and one staphylococcus.

Anesthesia of Large Animals*

SOME FORM of anesthesia should be used in all types of surgery, except in those minor operations where the anesthesia will cause more discomfort to the animal than the operation.

Anesthesia is divided into two classes: 1) General anesthesia, which is characterized by the loss of consciousness, and 2) local anesthesia, in which greater or lesser areas of the body are rendered insensible to pain, but consciousness is not lost.

General anesthesia may be produced by inhalation, in which the animal inhales the vapor of a drug, such as chloroform; by injecting the drug into the blood stream, usually into the jugular vein; or by placing the drug in the digestive tract, frequently by means of a stomach tube.

The physiology of anesthesia is discussed, for the anesthetist must understand this in order to choose the proper drug and method of administration. The signs of beginning anesthesia, of surgical anesthesia, and the danger signals are described, and their causes explained.

The various drugs used in general anesthesia, *i.e.*, chloroform, chloral hydrate, and the barbiturates, are discussed and their advantages and disadvantages described. Anesthetic shock, its cause, prevention and treatment are considered in detail.

Local anesthesia is produced by injecting into an area of the body a drug which temporarily destroys sensation in the part. The special indications for this form of anesthesia are given, and also the theory of its action.

Local anesthesia is divided into two classes: 1) Infiltration, in which the part to be operated is filled with the anesthetic, and 2) nerve blocking, in which the anes-

thetic is injected into or around the nerve supplying sensation to the part. Spinal anesthesia is a form of nerve blocking in which the entire spinal cord is blocked, but it is seldom used in surgery of large animals. Epidural anesthesia is a form of nerve blocking in which the nerves are blocked within the spinal canal but after they have left the spinal cord. It is used frequently, especially in cattle.

The various types of hypodermic syringes and needles are described, and the advantages and disadvantages of each are given. The site of injection must be carefully prepared to prevent the introduction of infection, and all equipment must be sterile.

The principal drugs used in local anesthesia, such as procaine and apothesine, are discussed in detail, and the proper use of each is given.

The methods of infiltration anesthesia are described and the types of surgery for which this anesthesia is adapted are discussed. The location of the chief sensory nerves that supply certain areas which are frequently subject to operation are described, and methods by which they can be blocked are given. Operations upon the teeth, feet, and many other parts may be rendered painless by this method.

A Study of the Composition of the Alveolar Air of Domestic Animals*

A KNOWLEDGE of the composition of the alveolar air is essential in the explanation of the principles of respiration of the domestic animals. Earlier investigators, such as Haldane, Krogh, and Zuntz, determined the amount of gases present in the alveolar air, blood and tissues for man principally, but similar work on domestic animals is meager or lacking. However, Zuntz and his coworkers did perform an extensive series of experiments on the expired air of the horse in a research experiment on metabolism.

The collection of the alveolar air samples from animals may be performed in a man-

*By Geo. R. Fowler; presented before the Section on General Practice.

*By George T. Edds; presented before the Section on Research and Poultry.

ner similar to that for man, with some modifications. For the horse and cow a tightly fitting mask attached to a sampling tube was placed over the animal's nostrils and muzzle. There was a short side-arm near each end of the sampling tube. The distal side-arm was provided with a rubber tube leading to a bottle filled with mineral oil. This bottle of oil served as a pressure device when an alveolar air sample was to be collected. The other side-arm was provided with a rubber connection to the sampling syringe.

These side-arms were closed with clamps, except during the transfer of a sample from the tube to the syringe. The lower end of the sampling tube was provided with a rubber tube. The air was forced into the tube when expiration of the experimental animal was forced. At the end of the forced expiration the upper and lower ends of the sampling tube were closed by clamps. For sheep, goats and dogs, a 300 mm. condenser jacket served as the sampling tube.

The alveolar air sample, having been collected in the sampling tube, was transferred to the gas-analysis apparatus by means of a 50 ml. Luer syringe. The plunger of the syringe was coated with liquid petrolatum to prevent air leakage.

A sample of known volume was introduced into a modified Haldane-Henderson gas-analysis apparatus. The volume percentages of oxygen, carbon dioxide, and nitrogen were determined. The carbon dioxide was absorbed from the unknown sample with 10 per cent sodium hydroxide; the oxygen was absorbed with alkaline pyrogallol; and the nitrogen and inert gas volume were determined by difference. With these volume percentages the partial pressures of the oxygen and carbon dioxide were determined. The partial pressure of the gases in the alveolar air determines the rate of gaseous exchange between the organisms and their environment.

The results obtained in the horse were very similar to those obtained by Zuntz and his coworkers. They are also similar to those obtained in man by Haldane. The results for other species investigated compare favorably with the above. Therefore, it may be concluded that the same prin-

ciples of gaseous exchange that apply to man are also applicable in those species investigated.

Mineral Deficiencies: Clinical Picture, Treatment and Prevention*

IT IS NOT many years since a college student in his animal nutrition work was taught that protein, carbohydrates and fats were the three essential ingredients of a complete feed. Today, the student of animal nutrition must learn in addition to these ingredients something about a number of vitamins that have since been found to be essential to the well-being of animals, and also a great deal about a number of different minerals, for these have been found to be just as essential for the health of animals as a feed well balanced with respect to protein, carbohydrates and fats. It is with these mineral elements that we wish to concern ourselves here.

The information that has been accumulated on the mineral needs of farm animals is already so extensive that to cover the subject completely would require more time and space than is available here. Hence, this paper is confined to the essential minerals for horses and ruminants.

Among the mineral elements required to maintain animal health, we need concern ourselves here only with those which are likely to be deficient in the natural herbage upon which the animals subsist, or which are likely to be deficient in the feed and which, in case of a deficiency, may eventually lead to interference with the well-being of the animal. Of these, phosphorus, calcium, iron, cobalt and iodine are of particular importance.

The amounts of these mineral elements required by the different classes of animals have been roughly determined. In the case of calcium and phosphorus, it has also been determined that these elements are closely allied and one must be available to the animal in a fairly definite proportion to the other. This latter fact is very frequently overlooked and, consequently, ani-

*By H. Schmidt; presented before the second general session.

mals frequently suffer from a phosphorus deficiency which is manifested not only by ill health but also by poor performance and production.

The amount of these elements available to the animal depends upon their abundance in the feed. We know that these two elements can vary widely in the different parts of the plant. The herbaceous part is the main storehouse for the calcium, while the seed envelops the phosphorus. The calcium and phosphorus contents of all plants are not the same and, thus, we find plants that are comparatively low in calcium and some that are comparatively high in calcium. The same is true of the phosphorus content. The calcium and phosphorus contents vary throughout the life of the plant. The young plant is relatively rich in these elements but the amounts diminish as the plant matures, and a considerable portion is lost through drying and leaching.

All of these factors must be considered in the nutrition of farm animals whenever the mineral elements in feeds are on the borderline of sufficiency. That vitamin D is needed for the proper utilization of these elements, especially when they are provided only in borderline amounts, is now quite well known.

An imbalance of these two minerals, a gross deficiency of one or the other, or a gross excess of one or the other causes rickets. In mature animals we speak of the condition as osteomalacia and osteodystrophia fibrosa. Clinically these diseases manifest themselves in unthriftiness, emaciation, lameness, enlargement of bones, poor food consumption, weakness and, finally, death.

Iron, copper and cobalt profoundly affect the blood picture of the animal and an improper supply of them may lead to marked anemia. Especially prevalent is a cobalt deficiency in animals in certain parts of the world, and the clinical condition caused by it has usually received a local name, such as coastiness, bush sickness, enzoötic marasmus and Nakururitis. In this condition the animals become un-

thrifty, weak, emaciated, unproductive and, unless the condition is remedied, die.

So-Called Hemorrhagic Septicemia*

FOR MANY YEARS hemorrhagic septicemia has been the diagnosis of doubtful cases, especially those where there are pulmonary symptoms and sudden deaths, and when autopsy shows petechial hemorrhages. However, its prevalence among domesticated mammals has long been a subject of contention.

No doubt, hemorrhagic septicemia occurs as a primary and destructive disease in animals, yet we believe that it is so rare that we are not justified in diagnosing it without the confirmation of reliable laboratory tests. In eight years, with one possible exception, we have failed to get such a confirmation, although specimens from all suspected cases have been checked.

Although swine plague is still constantly mentioned among prevalent swine diseases, it is seldom if ever found in the western corn belt. Likewise, cattle and sheep maladies frequently diagnosed as hemorrhagic septicemia in the field can rarely be confirmed as such by the laboratories.

We now know that the supposedly typical symptoms and lesions of hemorrhagic septicemia can result from a variety of factors, such as deficiencies, toxins, viruses, other germ infections and even certain parasites. Evidence is also accumulating to substantiate the belief that, when present, the *Pasteurella* organism is but a secondary invader.

A diagnosis of hemorrhagic septicemia has long been popular with the laity, probably because of its tongue-twisting, impressive title, and it seems logical that this plus the ease of administering specific biological products has made it unduly popular with the profession. We would plead the case of accuracy by considering hemorrhagic septicemia as "always innocent until proved guilty."

*By W. A. Aitken; presented before the Section on General Practice.

Variable Factors in the Measurement of Red Cell Sedimentation*

THE PHENOMENON of the settling out of blood cells in their fluid medium has been known since the time of Galen in the second century. However, apparently little clinical significance was attached to it until a quarter of a century ago. During the past 25 years, sedimentation, as the phenomenon is now termed, has been studied in a great variety of pathological conditions, with a resulting consensus of opinion that it is a delicate, nonspecific measure of alterations in the fine physico-chemical balance of the blood, these alterations being the result of destructive disease. With the wave of enthusiasm accompanying the so-called rediscovery of the phenomenon, there has come into use a multiplicity of techniques, some basically sound and some faulty. This has brought only confusion in the measurement of this phenomenon. Theoretically, there are many factors, variations of which may introduce errors, great or small, in the determination and interpretation of sedimentation.

SOURCES OF ERROR IN THE DETERMINATION AND INTERPRETATION OF SEDIMENTATION

1. Inadequate history of the source of the blood sample may lead to an incorrect interpretation of the results. Failure to take into consideration physiological states, such as pregnancy and estrum, is a profound source of error.
2. Failure to adopt a uniform procedure of obtaining blood samples may magnify errors produced by manipulation of the venous stasis, or the like.
3. Too much or too little anticoagulant may exaggerate the undesirable effects already present in this variable but necessary requirement for determining sedimentation.
4. Insufficient agitation of the sample prior to starting the measurement of the phenomenon will fail to disperse adequately the solid elements and will thus render the

comparison of curves of sedimentation incorrect.

5. Capillary influence in small bore tubes is said to decrease the accuracy of determining sedimentation. It is suggested that shorter tubes allow less accuracy of measurement than longer ones. Deviations from perpendicularity of the tube and variations in the uniformity of bore introduce variables rendering comparison of samples inaccurate.

6. Any delay in determining sedimentation following bleeding apparently introduces a variable retarding influence on sedimentation.

7. Extremes in the external temperature at which the test is conducted alter the reaction.

8. Theoretically, variations in the number of solid elements must necessarily induce variations in the curve of sedimentation, but it is doubtful whether correction of the samples to a chosen number of elements can be accomplished without altering other important physico-chemical factors influencing sedimentation.

9. Continuous examination (photographically) indicates that the rate of descent of the line of demarcation between cells and plasma, especially in the horse, is represented by a sigmoid or S-shaped curve. To answer the questions as to whether there is any deviation from the normal variation of the rate of descent of the line of demarcation between cells and plasma, and what kind and how much deviation, one must compare entire curves of sedimentation and not single readings or indices. A single reading of the position of the line of demarcation between cells and plasma or any other procedure which does not at least attempt to portray the phenomenon as a continuous procedure in all probability fails to measure the actual phenomenon of sedimentation.

Intravenous Medication*

THE VALUE of intravenous medication is generally recognized by the veterinary profession. By means of such medication it is

*By R. E. Nichols; presented before the Section on Research.

*By W. R. Krill; presented before the Section on General Practice.

possible to get more rapid action and, as a result, many animal lives are being saved. Prussic acid poisoning is a very striking example of this. Where practically all animals formerly died after eating plants containing these poisons, it is now possible to restore normal health to affected animals within a few minutes by the injection of neutralizing agents directly into the blood stream.

Intravenous medication is now used with success in milk fever of dairy cows.

Blood transfusions are being used more extensively each year by veterinarians. In many conditions, such as severe shock or accidental injury, this therapy is commonly used. In sweet clover poisoning of cattle, blood transfusions save many lives. When this therapy is used in valuable purebred horses, blood typing is recommended but not indispensable. As far as is known, different blood types do not occur in cattle.

In the treatment of many infectious diseases the intravenous administration of antisera gives much more rapid and beneficial results.

For the administration of certain anesthetics the intravenous administration is gaining favor. The ease and safety of this technic of administering anesthetics has resulted in better and more humane surgery.

Behavior of *Brucella* Vaccine in Various Excipients in Animal Inoculations*

WHILE vaccination against brucellosis in cattle has been practiced for many years and numerous publications are available on the results both with living and killed vaccines, data pertaining to the mechanism of absorption of the vaccines are very limited.

The studies were undertaken primarily to determine the length of time required for the absorption of the living vaccine from the injected area, and also to incorporate cultures in various excipients in order to establish whether it might not be possible to prolong the absorption from the point

of injection so that the immunizing action would be enhanced.

The experiments were carried out on cattle and rabbits. U. S. bureau of animal industry strain 19 was used in all instances. Aside from the usual saline suspension, oil of vaseline, oil of sweet almond, cholesterol, saponin and lanolin were used as excipients. The studies included the behavior of the *Brucella* organisms in these excipients *in vitro* as well as *in vivo*.

It was found that, unlike other organisms, the *Brucella abortus* suspended in salt solution remained viable at the point of inoculation for at least 60 days. While at that period the number of colonies obtained from the inoculum were only few, on the other hand, when incorporated into cholesterol and other excipients, large numbers of colonies were obtained for longer than 60 days following the subcutaneous injections.

The studies also included the examination of various regional lymph glands and other tissues for the presence of *Brucella* organisms in the vaccinated animal. Throughout the experiments the agglutination titre was studied in the various animals.

It is proposed to continue the experiments for studies of the relationship of the prolonged absorption of the vaccine to the degree and duration of the immunity, as well as the safety of the procedure for adaptation to calfhood vaccination.

Pneumonia in the Horse*

THE CLINICAL evidence of pneumonia in the horse would tend to indicate that it is a secondary condition and rarely, if ever, a primary disease.

The primary agent appears to be some filtrable virus which affects the upper respiratory and adjacent organs, and possibly the digestive organs. The virus infection aids in lowering the natural resistance of the body to various types of secondary invaders. The streptococcal organism is predominant as the secondary invader. It is

*By A. Eichhorn, C. K. Mingle and F. M. Murdock; presented before the Section on Research.

*By D. L. Proctor; presented before the Section on General Practice.

the real causative factor in pneumonia in the horse.

There appears to be clinically no specific treatment for the condition. Some of the newer drugs, such as sulfopyradine, which has apparently given amazing results in human medicine, have theoretically, and in my experience, little if any value in comparison to some of the older and time-tried preparations in the treatment of pneumonia in the horse.

In dealing with this malady, preventive measures, as far as they deal with segregation and elimination of exposure to the so-called virus diseases and streptococcic infections, should be our first consideration. Light, cleanliness, ventilation, nursing and feed play a large part in the treatment and prognosis.

The skill and ingenuity of the practitioner will be taxed to render aid and supportive treatment to keep up the metabolism and the normal functioning of the organs, especially the heart. Good nursing, as in the years past, is still of paramount importance.

Susceptibility of Guinea Pigs to Equine Encephalomyelitis Virus Inoculated Through Various Routes*

VARIOUS sporadic enzoötic and epizootic nervous diseases are known to occur among horses, but since the widespread occurrence of equine encephalomyelitis, there is a tendency readily to classify all nervous diseases manifested by general symptoms as encephalomyelitis. This practice, if continued, will lead to error in evaluating the effectiveness of vaccination and treatment.

A varying incidence of the occurrence of encephalomyelitis in herds of susceptible horses has been noted by all investigators. Undoubtedly, several factors are associated with this, such as the virulence of the virus, the dose inoculated, the site of inoculation and the resistance of the host.

Meyer and other investigators have shown that all laboratory animals can be

experimentally infected by inoculation intracerebrally with infective material. When other sites for inoculation are used, the results may vary greatly.

In my experiments I sought to learn the percentage of reliability of the various methods of inoculation into experimental animals of infective material from cases of encephalomyelitis. The objectives were to provide a standard for evaluating the results of vaccination or treatment and to establish a standard whereby one can more accurately weigh negative results following the inoculation for diagnostic purposes of suspected material into experimental animals.

Guinea pigs were selected as the experimental animals. Inoculations of suspensions of brain in saline solution were made intracerebrally, intralingually, subcutaneously, intraperitoneally and intracutaneously into the foot pad of the left hind foot and the tip of the nose. Similar suspensions and doses were inoculated into all animals. This procedure was repeated four or more times for each group. All of the animals receiving intracerebral inoculations succumbed. Results varied when other methods of inoculation were used.

The brain from each animal that succumbed was examined histologically to determine definitely that encephalitis was present.

A Method for Correlating Serum Calcium, Phosphorus, and Protein Findings in the Clinical Study of Horse Blood*

IN A SERIES of horses totaling more than 200, in which each animal was examined one or more times, we determined simultaneously the serum content of calcium, inorganic P, total protein, total globulin, albumin and, in about one-half of the subjects, the total non-protein nitrogen.

As to physical condition, these subjects may be classed in three groups: a) Generally normal and sound of limb; b) sound of limb but showing symptoms of gen-

*By Carl F. Schlotthauer; presented before the Section on Research.

*By A. Henry Craige, Jr., and John D. Gadd; presented before the Section on Research.

eral disturbance, *e.g.*, bronchitis, gastric tympany and enteritis; and c) generally normal, but with bone deformity, *e.g.*, spavin, ring-bone, splints and navicular disease, sometimes accompanied by and undoubtedly causing lameness. In numbers the first group exceeds the others.

The animals selected were preponderantly Thoroughbreds, with draft breeds and other sporting breeds represented in only a small group. All ages, sexes and various environmental and physiological factors were considered. In the majority of the clinical cases the diagnoses were made by one of the collaborators (G), while the remainder were made under the direction of Dr. William J. Lee of the University of Pennsylvania veterinary hospital staff.

From the results of these studies we determined the individual distribution for each of the various chemical components of the serum supplementing and extending the work reported by others. Having made our analyses simultaneously on the same specimens, we were also able to correlate our individual results, which we did for the entire series. The system evolved for correlating the several results, each of which may fall within the usual range for the single component, enabled us to detect trends which otherwise could not have been observed.

Basing ourselves on a few clinical cases where this correlation showed a definite variation from the usual findings, we are hopeful that the system will be of use in evaluating blood-serum findings in cases of suspected mineral imbalance. Also, we feel that such a procedure will aid us in judging the state of mineral balance in young horses, a question which seems to demand much consideration, particularly as to young horses of the sporting breeds.

At present most of our attention is focused on young animals, foals and yearlings, for it is during this stage that the strength of bone is established and the lesions due to strain in later life have their beginning. Accordingly, we believe that the study of the blood-mineral content in a group of young horses gives an important indication as to future soundness and stamina.

Incubating Hen's Egg as a Culture Medium for *Brucella Abortus**

AN INVESTIGATION was undertaken to ascertain, first, whether the repeated egg to egg transfer of *Brucella abortus* will alter the virulence or the cultural characteristics or the antigenic properties of the organism and, second, whether the incubating hen egg can be used to type different strains of *Br. abortus*.

All eggs were inoculated through the natural air sac on the tenth day of incubation. Strain 19 and a recently isolated virulent strain (strain C. G.) were used throughout the experiment. At the start of the experiment a series of guinea pigs and eggs were inoculated with graduated doses of strain 19 and another series with strain C. G. The lesions produced were noted for comparison with a similar set of inoculations at the end of the experiment.

Two eggs inoculated with approximately 130,000 organisms of strain 19 and two inoculated with approximately the same number of strain C. G. were selected for the inoculation of another set of eggs. The inoculum was prepared by grinding an aseptically removed liver and washing the sand with 20 cc. of sterile saline. Two-tenths cc. of a 1:8 dilution of the 20-cc. suspension from each liver was inoculated into each of two eggs.

With each transfer, the egg living the longer period was selected for the inoculation of two more eggs. The number of organisms inoculated at each transfer was counted by plating on tryptose agar 0.1 cc. of a 1:10,000 dilution of 20 cc. suspension.

The chorioallantoic membrane, liver, spleen and brain of all embryos were cultured on potato agar. All embryos living on the 17th day of incubation were killed and cultured. All cultures were checked for contamination by microscopic examination. A record was kept of all lesions observed in the embryos. One culture from each egg was incubated aerobically.

Suspensions of strain 19 and of strain C. G. from the eleventh transfer and from the original cultures of these two strains

*By H. J. Metzger; presented before the Section on Research.

were inoculated into guinea pigs. The pigs were killed at 6 weeks, and the lesions produced, the blood titre, and the cultural characteristics of the organisms all indicated that neither strain 19 nor strain C. G. was changed in any way by eleven egg to egg transfers. Strain 19 continued to grow aerobically throughout the experiment. Antigen produced from these two strains obtained from the eleventh transfer checked exactly with our stock antigen.

The possibility of using the incubating egg for the purpose of typing different strains of *Brucella abortus* was investigated by inoculating the series of eggs, one with different doses of strain 19 and the other with different doses of strain C. G. The dosages varied from 150 to 13,000,000. The length of time the embryo lived after inoculation and the lesions produced were recorded.

A careful study of these records indicates that there is no significant difference between the effects produced by strain 19 and those produced by the more virulent strain C. G.

Induced Bloat in Dairy Cows*

BLOOD samples were taken under mineral oil, simultaneously, from the portal and jugular veins of sheep anesthetized with nembutal. These samples were analyzed for CO_2 content. Ligatures were applied to the esophagus near the cardia and to the abomasum near the omaso-abomasal orifice, thus confining the gas (CO_2) which was injected into the rumen to the first three compartments. After the gas had remained in the rumen for one minute, blood samples were again taken from the portal and jugular veins and gas analyses showed a marked rise in the volumes per cent of CO_2 (as much as 10 volumes per cent) in the portal blood but no change in the jugular blood. CO_2 is absorbed quite rapidly from the first three compartments of the sheep's stomach and apparently dissipated in the expired air. The rate of absorption is directly proportional to the amount of pressure in these

compartments. Later experiments showed that the rumen is the chief seat of absorption.

CO_2 pressures in the rumen caused a rise in the blood pressure, an increase in the heart rate, and an increase in the rate and depth of respiration in anesthetized sheep.

Carbon dioxide, methane, mixtures of CO_2 and CH_4 , and air pressures were established in cows with rumen fistulae, at different measured pressures. CO_2 and mixtures of CO_2 and CH_4 produced marked clinical symptoms and very decided variations in respiration and rumen motility. Much higher air pressures had little effect on the animals except to cause the breathing to be more shallow and to change the rumen motility. Changes in the rumen motility are quite similar in all types of gas. As the pressure increases, the speed and amplitude of contractions are decreased. The rate and length of contractions increase as the pressure decreases. When air pressures in the rumen became quite high, the animals grew very uneasy.

Absorption of CO_2 occurred much more rapidly when the rumen was nearly empty than when it was full. This work was done to simulate conditions existing in the rumen of cows affected with the "frothy" type of bloat, such as we have observed in postmortem examinations of cows that were bloated on irrigated ladino clover pastures. Gas and ingesta were completely mixed in a frothy mass, thus exposing most of the rumen wall to the contained gases.

The intraruminal pressure of one acute case of bloat on ladino clover pasture was measured.

Analyses of normal rumen gases obtained from cows on ladino clover pasture are being made at the present time. These are being compared with the analyses of rumen gases obtained from actual bloat cases.

Some work is being done at present that shows considerable promise. Intravenous injections of sodium bicarbonate and sodium lactate are being made in an attempt to raise the CO_2 combining power of the blood. Ordinary treatments are practically useless in the "frothy" type of bloat that occurs on certain pastures.

*By R. W. Dougherty; presented before the Section on Research.

A Systematic Survey of the Gastrointestinal Worm Parasitisms of Cattle*

THIS IS A STUDY of the results obtained from more than 8,500 examinations of bovine fecal samples. The sampling was made at monthly intervals from February of 1937 to May of 1939 on a group of 66 experimental animals kept at the Veterinary Experiment Station, Ithaca, N. Y. These animals were dairy heifer calves and ranged in age from 6 to 8 months. They were purchased from a large number of dairy farms in central New York State.

During the 28 months of testing they were provided with good pasturage during the warm months and with an adequate grain and hay diet during the winter, and were comfortably housed. Six of the animals were removed from the herd during the period. The samples were obtained manually from the rectum and a slight modification of the Stoll technic was employed for examination.

Five different counts were made from each sample examined and the results in terms of the number of worm ova per gram of feces were recorded for the *Strongylus* sp., the *Nematodirus* sp., the *Trichuris* sp., and *Moniezia* sp. Counts of the coccidial oöcysts per gram of feces were also made but are not included in this study.

During the period of investigation most of the cows completed one gestation period and many of them now have calves at their side. No outbreaks of acute infections occurred during the period and during the final 18 months no clinical evidence of internal parasitism was observed.

The variations in the worm-egg counts, as shown by the data collected, are presented in the form of charts and graphs. The significant facts respecting the variations in kinds and numbers of the worm burdens of the 66 animals over a period of 28 months are summarized.

In general, the data indicate that there was a period of about one year during which marked fluctuations in the worm bur-

dens occurred. During the remainder of the period the counts of worm ova became stabilized at a low level in most of the animals.

Diseases Incident to Fattening of Lambs*

DISEASES causing the heaviest losses among lambs in the feed pens may be classified into those associated with shipping and those due to errors in diet.

The vast areas of our Western Range States comprise the breeding ground of the millions of lambs which are transported to the feed pens annually. The long distance on the trails to the loading points on the railways and subsequent hours on board trains, especially in stormy weather, subject the lambs to infections through fatigue and exposure.

Hemorrhagic septicemia, nonspecific pneumonia, paratyphoid dysentery and sore mouth (contagious ecthyma) are the most common diseases causing heavy losses following such exposure. The practice of requiring a twelve- to 24-hour fast period before weighing in at the receiving points on the railroads should be discouraged, and shrinkage figured on a percentage basis offered as a substitute. Lambs loaded immediately after such a fast period and then subjected to a 36-hour ride on the cars before being fed and watered arrive in the feed pens in a weakened condition and are subject to almost any infectious condition. Long fast periods are recognized as being the direct predisposing cause of paratyphoid dysentery. Particularly in stormy weather the unloading and feeding periods should not be extended beyond 24-hour intervals.

The sudden change from the wide, open range with its natural grass feed to the close confinement of the feed pens and a more concentrated and heavy diet results in outbreaks of coccidial dysentery and losses due to overeating. Lambs are particularly sensitive to indigestion and extreme care must be exercised, especially in

*By Donald W. Baker; presented before the Section on Research.

*By N. J. Miller; presented before the Section on General Practice.

starting the lambs on their new diet. This care must be continued throughout the whole feeding period, until they are marketed.

Close confinement and errors in diet during the first three weeks in the feed pen are held as the predisposing causes of coccidial dysentery.

Overeating, as the term might imply, does not mean a single or sudden engorgement. Rather, it is the product of the continued consumption of more concentrates than can be properly digested and assimilated. Overeating is a specific entity presenting characteristic symptoms and pathology, and probably causes a greater death loss in the feed lots in Colorado than all other maladies combined. An approximate ratio of the number of days on feed to the amount of concentrates fed must be maintained to control this condition.

"Lambing down" cornfields and pasturing of pea fields have been entirely abandoned in Colorado because of the heavy losses occurring under these conditions.

External parasites are of little consequence in the consideration of feed-lot diseases. Scab has practically been eliminated through federal regulations, and ticks do little damage. Internal parasites cause a small death loss in the feed pens but the condemnation of livers in the slaughter houses from liver flukes and the fringed tapeworm cause an estimated economic loss of \$250,000 annually.

An Attempt to Produce Preparturient Paresis in Ewes*

THE OBSCURE etiology renders experimental production of preparturient paresis in ewes unreliable. Since the disease is apparently metabolic in origin and is characterized by ketosis, lowered alkali reserve, and hypoglycemia (although a hyperglycemia is not uncommon), frequent blood analyses were made on 42 ewes divided into four groups and subjected to a variety of environmental and nutritional conditions. It was hoped that one of the groups, even if the disease

were not produced clinically, would show a blood picture tending towards ketosis and a lowered alkali reserve as pregnancy advanced.

The first group was maintained on a dry pasture and fed sufficient well cured alfalfa hay throughout the entire gestation period. The second group was maintained under similar conditions during the first three months of pregnancy and then moved to a small enclosure with concrete flooring. After being moved they were fed wheat straw and soybean meal. The third group was maintained in a small enclosure and fed sufficient alfalfa hay during the entire gestation period. The investigations on these three groups were conducted between August 1, when the ram was placed with the ewes, and January, when lambing was over. The fourth group was started in January and continued until June. They were maintained on pasture with alfalfa hay supplement for three months after the ram was introduced, after which they were moved to a small enclosure with concrete flooring and fed soybean meal fortified with 50 per cent cottonseed oil. No roughage was given.

METHODS OF ANALYSIS

Sugar.—Oxalated blood was deproteinized by the zinc hydroxide method of Somogyi and sugar determined by the Benedict (1931) method. By this procedure glutathione and ascorbic acid were not included in the sugar values.

Ketone Bodies.—Ketone bodies, expressed as acetone, were determined by the method of Behre and Benedict.

Alkali Reserve.—The plasma CO_2 capacity was determined by the Van Slyke method using the manometric apparatus.

No analysis was made for ketone bodies unless the sugar or plasma CO_2 was abnormal.

RESULTS

Of the 30 animals in the first three groups, four died of pneumonia, 17 ewes had single lambs, eight had twins, and one failed to conceive. No cases of the disease appeared in either group and there was no appreciable difference in the blood-sugar

*By H. S. Cameron and H. Goss; presented before the Section on Research and Poultry.

level or alkali reserve in any group. In group I the blood sugar ranged from 17 to 51 mg. per cent, with an average of 33.2; in group II, from 22 to 44 mg. per cent, with an average of 32.5; in group III, from 18 to 40 mg., with an average of 29.6. The alkali reserve, expressed as volume per cent CO_2 , ranged in group I from 37 to 75, with an average of 57.6; in group II, from 45 to 67, with an average of 57.7. Group III ranged from 41 to 69, with an average of 54.8. Final results of a fourth group, which is on a ketogenic diet, are not yet available.

In the field cases that we investigated, an acidosis and ketosis were almost invariably present. Hypoglycemia was encountered much more frequently than hyperglycemia. A change in methods of handling and feeding in all cases stopped further losses.

Treatment by administering glucose intravenously was unsuccessful.

Studies on the Total Ketone Bodies, Sugar and Calcium in the Blood of Nonpregnant Ewes*

FIVE NONPREGNANT ewes of good to choice quality, approximately $1\frac{1}{2}$ years old and weighing an average of 115 pounds, were used for these studies.

The analyses for total ketone bodies were conducted according to the method of Van Slyke and Fitz. The acetone precipitate was cooled in a desiccator before weighing, as suggested by Koch. The ketone bodies were computed as milligrams of acetone per 100 cc. of blood by multiplying the milligrams of precipitate by the Van Slyke-Fitz factor of 1.24. Sugar was determined by the Shaffer-Hartmann-Smoggyi method, according to the technic described by Koch.

Moderate exercise—walking at a rapid pace for 15 minutes—produced no significant change in calcium and only a slight increase in sugar. Vigorous exercise—running at a gallop for 10 minutes—did not affect the serum calcium but resulted in a tremendous increase, an average of 85 per cent over the preexercising level, in blood sugar.

Four trials were conducted in studies on diurnal fluctuations of total ketone bodies, sugar, and calcium. Samples of blood were collected at two to three-hour intervals, beginning at 8:30 a. m. and ending at 4:30 p. m. No pronounced fluctuations were encountered. The average for the calcium content remained nearly constant throughout the day but the averages for total ketone bodies and sugar were slightly higher at 4:30 p. m. than at 8:30 a. m.

The effect of fasting was studied in two trials. The first period lasted eight days; the second, seven days. The ewes were kept in quarters with either concrete or wooden floors. Water and salt were available throughout each fast. Similar results were obtained for both of the trials. These were: 1) A significant though not a great increase in total ketone bodies, the increase taking place during the last two or three days of each fast; 2) a pronounced lowering, an average decrease of 30 per cent, in the blood-sugar content, which began on the second day of each fast, remained at a rather constant level until about the fifth day, and then gradually rose but not to the prefasting level; and 3) no change in the concentration of serum calcium.

A series of experiments was planned to determine the effects of certain feeds and combinations of feeds, fed at different levels for short periods. The following results were obtainable.

1. The concentration of total ketone bodies was not affected to any significant degree. The average for a total of 70 determinations was 1.56 mg. per 100 cc. of whole blood (expressed as acetone).

2. Blood sugar was decidedly affected. The average sugar content for the five ewes on a ration of 2 pounds of shelled corn and 2.5 pounds of alfalfa hay per ewe per day was 53.3 mg. per 100 cc.; on a ration of 3.5 pounds of alfalfa hay per ewe per day, 40.34 mg. per 100 cc.; on a ration of alfalfa hay fed *ad libitum*, 65.99 mg. per 100 cc.; and on a ration of 2 pounds of shelled corn per ewe per day and alfalfa *ad libitum*, 68.98 mg. per 100 cc. of blood.

3. The calcium content was not affected. The average for a total of 65 analyses was 12.03 mg. per 100 cc. of serum.

*By Jesse Sampson, L. E. Boley and Robert Graham; presented before the Section on Research and Poultry.

Accidental Canine Thallotoxicosis and Dangers of Thallium Used as a Rodenticidal Agent*

By CHARLES P. LARSON, M.D., C.M., WILLIAM N. KELLER, M.D.
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THE SYMPTOMATOLOGY and pathological lesions produced by thallium poisoning have been thoroughly studied both in experimental animals and man. Human poisoning has resulted from industrial exposure, application of thallium as a depilatory and cancer cure, and accidental ingestion of the metal used for entomological and rodenticidal purposes and as a means of suicide or homicide.

A complete review of human thallotoxicosis has been made by Munch,¹ who collected 778 cases, of which 46 (6 per cent) were fatal. Industrial exposure accounted for twelve cases with no fatalities, clinical uses for 692 with 31 deaths and accidental poisoning for 21 with five deaths. A large number of the poisonings from clinical application of thallium followed the use of "Koremlu Cream," a depilatory ointment. This paste contained 5 to 10 per cent of thallium acetate and most of the cases of poisoning resulted from licking the lips after application of the substance to the face.

Thallium is a heavy metal having an atomic weight in the periodic table between that of lead and mercury. It has toxic and pharmacological properties in common with these metals. The depilatory and toxic doses of thallium salts are remarkably constant both in animals and man. Eight mg. of the acetate per kg. of body weight by mouth has been established as the depilatory dose and 10 mg. as the toxic dose. The minimal lethal dose for animals and man lies between 15-25 mg. per kg. of body weight.² These figures are for the monovalent salts, the trivalent salts being much less toxic.³ The metal is much more toxic

for adults and adolescents than for children so that its clinical use is now restricted to the latter. Thallium is slowly excreted by the kidneys and bowel and accumulates in the body, the highest concentration being in the liver and kidneys. It has been recovered from the urine 2½ months after a single oral dose.⁴

SYMPTOMS OF THALLIUM POISONING

The symptoms of thallium poisoning both in animals and man are somewhat similar, being determined by the severity of the intoxication. In depilatory doses the hair of the scalp alone falls out, but even under carefully controlled conditions there usually are mild joint pains, lassitude and anorexia. In moderately severe cases of poisoning there is pain and weakness of the extremities, joint pains, lassitude, abdominal cramps, extreme thirst, diarrhea or constipation and semicoma.⁶

Delayed symptoms are paralysis of extremities with foot drop, generalized epilation, leukocytosis and albuminuria. Lethal poisoning is characterized by prolonged vomiting, abdominal cramps with diarrhea and excess salivation. In a few days blebs and ulcers form on the mucosal surfaces of the mouth and nose; there is epilation and ulceration of the skin, and signs of cerebral involvement, such as paralysis, convulsions, twitchings and delirium, appear. Death appears to be due to cerebral involvement and is preceded by a rise in temperature.

THALLIUM CAN ACT AS VIOLENT CENTRAL NERVOUS SYSTEM POISON

Thallium may be recovered from practically every organ of the body in lethal cases of poisoning. Many of the body organs show pathological lesions produced by the metal. Numerous microhistological

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lesions of the nervous system have been described, which include degenerative changes in the spinal ganglia, spinal cord and brain.⁶ Destruction of axis cylinders and nerve cells has been recorded.⁷ It may be concluded that thallium can act as a violent central nervous system poison, which conclusion is substantiated by the clinical symptoms of the intoxication.

The testes show extreme tubular degeneration with inhibition of spermatogenesis.⁸ There may be degenerative changes in the pituitary, thyroid and adrenals which are probably produced by the direct toxic effect of the metal. In most cases the liver is only slightly damaged, presenting mild degenerative lesions in the parenchymal cells. The kidneys are extensively altered by degeneration of the tubules, which may be called a "chemical nephritis," resembling the lesions seen in mercury poisoning. In the gastrointestinal tract there is stomatitis, gastritis and hemorrhagic enteritis. Epilation is probably due to actual damage to the hair-follicle epithelium rather than to a secondary phenomenon following injury to the endocrine or nervous systems.⁹ Terminal bronchopneumonia is almost a constant finding but may not be due to direct action of the chemical. There is no effective antidote or treatment known.

ANIMALS GAINED ACCESS TO RODENTICIDAL FOOD, DESPITE CAREFUL HANDLING

This report is based upon several autopsies performed on dogs, cats and rats which had died from acute thallium poisoning. Responsible government agencies have from time to time recommended thallium salts as a rodenticidal agent, regarding it as safe if intelligently used and supervised. In a campaign against rodents at the Western State Hospital, thallium sulfate in salmon and ground beef as bait was placed around garbage dumps, granaries, pig pens and farms. An employé was trained in the preparation and placement of the poison by a representative of the U. S. biological department. Every safeguard and precaution was utilized and families were notified to supervise carefully the activities of pets and children. The thallium was placed

in spots ordinarily inaccessible to pets or children but, in spite of this, the majority of the pets on the hospital grounds were fatally poisoned.

The thallium proved to be a most effective rodenticide, since practically all of the rats were exterminated within a few days. The rodents almost invariably came to the surface and out of confinement to die, which seemed to be due to their extreme thirst and air hunger. It was also noted that the rodents would carry the bait out from its point of placement into the open. The pets were poisoned either from eating the dead or dying rats or from consuming the bait which had been carried into the open. On the basis of our experience, it must be concluded that the use of thallium



Fig. 1. Large intestine, showing hemorrhagic enteritis.

as a rodenticidal agent is very dangerous and will likely lead to extermination of animals other than rodents and even be a menace to children. Conversations with other hospital executives has revealed similar experiences in the use of thallium as a rat poison.

CASE REPORTS

Case 1.—This was a 4-year-old male Collie that weighed approximately 50 pounds and was well preceding the ingestion of thallium. The first symptoms observed were continuous vomiting, abdominal cramps, visible intestinal peristalsis, restlessness, general malaise and extreme thirst. On the second day he had a blood-stained diarrhea, a temperature of 103.2° F., a pulse rate of 160 to 180, increased labored respirations, and showed generalized weakness and paresis of the muscles of the head and neck.

On the fifth day epilation occurred around the base of the ears, scrotum, ankle and knee joints. This was followed by ul-

ceration and infection of the skin in the regions of epilation, ulcerative gingivitis and stomatitis. He was thirsty and would take fluids but vomiting would follow each ingestion. On the seventh day signs of cerebral involvement, such as twitchings, delirium and semicoma appeared. He lost about eight pounds during the seven days. He died on the eighth day following a series of generalized convulsions. The treatment had consisted of high enemas, gastric lavage, oral fluid and junket administration.

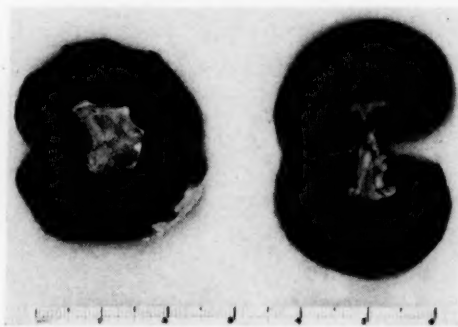


Fig. 2. Kidneys, case 1. Note loss of markings and diffuse hemorrhagic appearance.

Autopsy was performed twelve hours after death. There was an epilation of hair around the ankles and knee joints with underlying areas of ulceration. There were excoriations of the skin of the scrotum, nose, mouth and ears, with a necrotic gingivitis and stomatitis. All of the subcutaneous tissues presented a marked blood-stained edema. The pleural, pericardial and abdominal cavities contained an excess of blood-stained transudate.

The mucosa of the entire gastrointestinal tract was hyperemic, and in the mucosa of the stomach, large and small intestine there were superficial ulcerations and petechial hemorrhages (fig. 1). The peritoneum was intensely hyperemic and the abdominal lymph glands were swollen and edematous. The spleen was markedly enlarged, weighing 224 gm., the cut surface being dark red, soft, scraping both blood and pulp. The kidneys weighed 70 gm. each and on cut surface showed complete loss of all markings and a dusky, diffuse, hemorrhagic color (fig. 2). There was blood-stained

fluid in the pelvis of both kidneys, both ureters and in the bladder. The liver weighed 392 gm., had a tensely swollen, dark red capsule and on cut surface was extremely soft and friable, a dark red homogeneous color with complete loss of normal markings.

The adrenals, thyroid, pituitary and pancreas showed extreme degenerative changes. The heart weighed 168 gm. and had a very soft, friable, dusky red myocardium with complete loss of normal markings. Portions of the myocardium were of a mushy consistency and contained multiple petechial hemorrhages. The lungs were atelectatic, due to the bilateral serohemothorax and on cut surface presented hemorrhagic edema and patchy bronchopneumonia. Except for hyperemia, the brain appeared grossly normal.

Microscopic examination of the parenchymal organs showed an extreme degree of degeneration. The kidneys presented degenerative changes, with complete destruction of the epithelial lining of the tubules, disorganization with necrosis of the glomeruli and focal hemorrhages in the cortex and medulla. The most extreme degree of degeneration was seen in the liver, where all the parenchymal cells were necrotic, having lost both nuclei and cell structure. The finding of such an extreme degree of liver degeneration in thallium poisoning has not previously been recorded.

The spleen was the site of reticular hyperplasia with marked engorgement of the pulp. The pancreas and adrenals were partially autolysed. There was an extreme degree of degeneration of the seminiferous tubules of the testicles with complete inhibition of spermatogenesis. The gastrointestinal tract showed superficial ulcerations with very little exudative reaction. The myocardial fibers were undergoing necrosis and disintegration. This is also a unique finding in thallium poisoning. There was a bilateral, hemorrhagic, pulmonary edema and patchy bronchopneumonia. Skin ulcers were infected and the epidermis was destroyed with focal exudation in the cutis.

The central nervous system was severely damaged. The nerve cells of the cortex

presented the typical picture of acute swelling, with an occasional neurone undergoing necrosis. There was some fragmentation of the axis cylinders. In the basal ganglia and midbrain the arterioles were surrounded by perivascular cuffs of round cells. Petechial hemorrhages were numerous. In the basal ganglia, midbrain, hypothalamus, white matter of the cerebellum and pons there were multiple microscopic foci of recent softenings in which the nervous tissue had been destroyed and replaced by an exudate of round and polymorphonuclear cells with beginning gitter cell formation. The finding of perivascular cuffs of exudate, petechial hemorrhages, areas of demyelination and recent microscopic softenings have not, as far as the writers know, been previously described as occurring in thallotoxicosis of either man or animals. The condition present in this brain closely resembled the so called "chemical encephalitis" produced by other metallic poisons, such as arsenic.

A toxicological examination* was made of the liver, spleen and kidneys. The liver and spleen contained thallium but this was not estimated quantitatively. The kidneys weighed 140 gm. and yielded 8.9 mg. of thallium sulfate (recovered as thallium iodide and converted to the weight of thallium sulfate). Spectrographically, the thallium recovered from the organs contained traces of lead.

Case 2.—This was a 6-month-old Cocker Spaniel that weighed approximately 20 pounds. He lived four days after ingestion of the poison and presented symptoms similar to those observed in case 1. Autopsy findings were very similar to those of the first dog, with the exception that there was not such marked degeneration of the parenchymal organs.

Toxicological examination showed 3.18 mg. and 2.54 mg. of thallium sulfate for 80 gm. and 48 gm. of liver and kidney, respectively.

Autopsies performed upon other animals,

including cats and rats, showed similar pathological and toxicological findings.

A sample of the commercial thallium sulfate which was used as the rodenticidal agent was found to contain traces of lead, calcium, magnesium and sodium, but these other substances were not present in sufficient concentration to produce toxic symptoms, even with large internal doses of the commercial thallium preparation.

SUMMARY

The symptomatology and pathological lesions produced by thallotoxicosis are discussed.

Two cases of canine thallotoxicosis, with both clinical and pathological observations, are reported. There were several noteworthy pathological alterations in these cases which the writers have not found on reviewing the literature on thallium poisoning. These were severe degeneration with necrosis of the hepatic parenchyma and myocardium, and foci of recent softening, petechial hemorrhages, with perivascular cuffs of exudate in the brain. This latter condition might well be termed a "chemical encephalitis" due to thallium.

The use of thallium as a rodenticidal agent, even in the hands of an expert, is an extremely dangerous procedure, as it endangers both pets and children.

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*Quantitative thallium determinations were made by Joseph Beeman, M.D., director of the crime detection laboratory, Oregon State Department of Police.

Nonparasitic Skin Diseases of the Dog

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DURING the past decade, the veterinary profession has shown a great deal of interest in nonparasitic skin diseases. Research undertaken by various college staffs and individuals has disclosed considerable important data on the subject. Therefore, this discussion will include a consideration of some of the recent literature as well as a report of our own research.

There is no general agreement as to the classification and etiology of nonparasitic skin diseases. In this article they will be treated according to the most generally accepted etiologies.

DERANGEMENT OF PRINCIPAL ORGANS OF ELIMINATION

In the dog, as in the human, quite often dermatitis is a secondary symptom of a disease affecting some other part or organ of the body, and in these cases it is not always easy to diagnose. If any one of the organs of elimination fails to function properly, the others have to increase their activity in order to rid the body of the normal toxins of metabolism. Consequently, skin diseases may be a result not of a derangement of the skin, as a primary entity, but of one of the other major organs of elimination: the intestinal tract, kidneys and lungs. Therefore, it is advisable to look into the proper functioning of these organs in determining the etiology of nonparasitic skin diseases. Reestablishment of normal function of the deranged organ of elimination will often relieve aggravated cases of dermatitis. In any event, where there is a deranged condition of the skin, it is important to check closely all the organs of elimination, because the skin condition creates additional strain which may result in a breakdown of normal functions of these other organs.

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ENVIRONMENTAL FACTORS

Environment plays a large rôle in skin diseases, especially in city dogs. In certain cases environment may be the primary etiological factor while in others it is a contributing factor. City dogs are likely to be confined in small quarters, and to get very little exercise other than an occasional walk around the block. In winter, a dog living in an apartment is subjected to dry heat and poor ventilation. When he is taken out, he is exposed to a much lower temperature and probably to ice or snow. In summer, the "apartment dog" is brought from a dark, relatively cool building into extreme heat and the direct solar rays. Such conditions account for many cases of skin diseases.

ALLERGY AND HYPERSENSITIVITY

Various tests for allergic reactions have been used in recent years. In general, these studies have failed to demonstrate conclusively that the majority of skin-disease lesions of the nonparasitic type are allied with dietary allergies. In many cases where positive reactions to skin tests were obtained, typical eczema was not produced when these reaction-producing substances were actually fed. Seasonal occurrence of the majority of these skin diseases in dogs receiving the same diet throughout the year is additional evidence that most types of eczema are not associated with food allergies.

Photosensitization of dogs is now more readily diagnosed. Cases of photosensitiveness usually occur in light-skin animals, the severity varying from a mild dermatitis to extensive blistering and tissue destruction. Such cases may be a result of the action of certain sensitizing agents as well as a lack of protective pigmentation of the skin.

Some cases of dermatitis have occurred in dogs which have roamed through lands heavily covered with certain types of vegetation. The same dogs, fed the same diet, were moved to a different location, where they were not exposed to thick vegetation. The dermatitis cleared up. Such cases indicate that plant toxins may be a factor in the etiology of some skin diseases.

Sensitivity to certain drugs and chemicals also appears to be etiological. Outbreaks of dermatitis have been observed in kennels disinfected and deodorized with chlorine solution. When the chlorine spray was discontinued, the dermatitis subsided. The only treatment needed in such cases is soothing local applications.

It is an established fact that too frequent bathing sometimes causes dermatitis, especially when harsh, strong or heavily medicated soaps are used. Cresol compounds and coal-tar derivatives particularly are likely to cause irritation when used too freely in baths. Flea repellents and louse powders of various kinds also are possible etiological factors.

FUNGI

More and more cases of fungus infection are being observed by veterinarians. This may mean that this type of infection is increasing, or it may signify more accurate diagnosis.

Several types of fungi have been described. The *Trichophyton* and *Achorion* were described by Brumley of Ohio State University in 1921. Sabouraud considered the *Microsporon lanosum* to be infective for animals, since it was commonly isolated from dogs, cats, and horses. In 1933, Davidson and Gregory, in discussing the literature on fungi, stated that *M. lanosum* is identical with the feline type. Favus in man, domestic mammals and birds is caused by the *Achorion schönleinii*. Sabouraud's classification of the fungi pathogenic for animals includes the *M. flavum*, *M. villosum*, *M. pubescens*, and the *M. tomentosum*. Dermatologists point out that there are more than 100 species of fungi known to be responsible for various derma-

tomytoses. This indicates that in the veterinary field there are still to be discovered probably many fungi associated with dermatophytosis.

In animals affected with fungi we find various types of lesions, including those that are dry and scaly, the follicular types and the small vesicular type. The parts affected are, in the majority of cases, the back, the axillae, and the base of the tail. Distress from the intensive pruritus is often quite noticeable and it is not uncommon for the affected dogs to gnaw the skin until it bleeds. Where the skin of the feet and lower limbs is affected, it is sometimes necessary to cover the feet so as to prevent the animal from chewing them.

Fungus infection appears in the spring-time and persists until cold weather sets in. Diet seems to have little bearing on the condition of dogs infected with fungi although overfeeding will usually aggravate the condition.

In diagnosing fungus infection, we find culturing to be the only practical method. Deep skin scrapings are taken and a pour-plate culture is made from Sabouraud's maltose agar. Cultures are incubated at 100° F. and inspected after 48 hours of incubation and at each 24-hour interval thereafter for at least two weeks. Pathogenic fungi grow slowly. Typical growth of pathogenic fungi produces white, or light-yellow colonies. The light, fluffy, dark-colored or multicolored fast-growing colonies are usually contaminated.

After treating the material with strong alkaline solutions, it is possible to make a diagnosis of fungus infection by use of the microscope from direct smears. This, of course, is difficult and can not be recommended for those who are not experienced laboratory workers.

The specially equipped ultraviolet lamp has been used rather extensively in making fungi diagnoses by the fluorescence test. This work is reported in detail in an article by Green and Morris.¹

In treating dermatoses caused by fungi we have used fungicidal solutions, such as sodium hypochlorite, phenol-mercury compounds, and various ointments and lotions

of recognized microbicidal characteristics. The results have been only partially satisfactory. Our best results have been obtained by the complete dipping of the infected dog in a lime-sulfur solution.

First, the dog is bathed in warm water with a mild soap. After partial drying it is dipped in a solution made from one part of concentrated lime-sulfur solution, diluted with 19 parts of water heated to a temperature of 105° F. The solution should be rubbed into the dog's skin while it is still in the bath in order to treat thoroughly all surfaces. The dog should then be wiped partially dry, leaving some of the solution adhering to its coat. This procedure is repeated twice at five-day intervals. Then, if the dermatosis persists, the treatment should be followed up at seven-day intervals.

After the lesions have been reduced to one or two small areas, they may be treated every three days by applying the solution to the infected spots.

One objection to the treatment is that it bleaches the hair of the dark-hair dogs. This is relatively unimportant, however, since the treatment stimulates the growth of normal, natural colored hair which soon replaces the faded or bleached hair.

NERVOUSNESS

Extremely nervous dogs, which show very little external evidence of skin irritation, but are constantly scratching and digging at themselves, are perplexing cases. These are generally unsatisfactory patients. The cause is apparently some deep-seated organic disturbance, which is not only very difficult to diagnose, but equally difficult to correct.

IMPROPER FEEDING

Overfeeding and improper feeding of dogs is unquestionably one of the major causes of skin disease. In overfeeding, the organs of elimination are taxed heavily and this may bring about one of the various forms of skin eruption. Improper feeding results in malnutrition, which may manifest itself in unhealthy skin condi-

tions. Improper feeding may produce not only skin lesions resulting from deficiencies but also a lowering of the resistance to infectious skin disease. In a study made by veterinarians in Chicago it was found that many cases of skin disease were due to improper feeding. The skin condition of the dogs suffering from malnutrition was quickly relieved when the animals were placed on an adequate balanced diet. The dogs returned to normal in all respects, with a healthy skin and a fine coat. These tests showed convincingly the rôle of nutrition in skin disease.

It has been found that, in general, the most satisfactory way to treat skin ailments related to diet is to feed a balanced ration rather than one disproportionately high in either protein or carbohydrates. By feeding excessive amounts of either protein or carbohydrates, certain digestive organs are overwhelmed. There are, of course, exceptional cases where a specialized diet is needed, such as dogs suffering from diabetes melitus.

Definite vitamin and mineral deficiencies are apparently the cause of certain types of skin diseases. The mechanism of the derangement is not understood. Vitamin A deficiency is considered responsible for some dermatoses. We know that a deficiency of this vitamin results in lowered resistance to infection. In vitamin A deficiency inflammation of the mucous membranes of the body orifices is common. When one considers the histological structure of the involved parts and compares these with the integument, it is readily conceivable that a deficiency of vitamin A may be a contributing, if not the main, etiological factor.

Flavins of the vitamin B complex are apparently quite closely allied with proper skin nutrition. Sebrell and Onstott² state that flavin is essential for the healthy growth of skin. A deficiency in this factor causes inconstant dermatitis consisting of erythema followed by a dry, flaky exfoliation. In male dogs, this dermatitis may involve the scrotum. It is most common on the chest, abdomen, and the inside of the thighs and the axillae. How im-

portant a part vitamin deficiencies play in the direct etiology of canine skin diseases is not definitely established but it has been shown quite conclusively that for the maintenance of healthy skin, the diet must be vitamin-adequate.

Mineral deficiencies also are charged with being both primary and secondary etiological factors in the evolution of skin diseases, but their rôle has not as yet been determined. It is known, however, that calcium and phosphorus are essentials and a proper diet should include a sufficiency of them.

References

- ¹Green, D. F., and Morris, M. L.: No. Amer. Vet., xix (July, 1938), 7.
²Sebrell and Onstott: U. S. Pub. Health Rpts., III (1938), p. 83.

Neuritides and Vitamin B

The discovery of Patton, Elvehjem, Arnold, *et al* establishing a definite relation between the nervous catyclasms of dogs named fright disease, hysteria, running fits, etc., and the vitamin B intake is but one of the chain of events in physiology that has been gradually turning the medical mind from drug to food ever since Eijkman's work on beriberi started that new line of thought in 1897.

One research after another has connected this factor with various neuritides, of which beriberi, tic douloureux, fright disease and polyneuritis are examples. That other nervous disorders definitely of vitamin B origin belong to that class is no longer regarded as conjecture. Sciatica, brachial neuritis, shingles (herpes zoster), neuralgia, hysteria, and even certain forms of insanity and paralyses are mentioned in the literature as diseases responding more or less to thiamin chloride treatment. This signifies, of course, that the aliment consumed did not contain sufficient vitamin B to support the structure and function of the nervous system, or for some unknown reason it was not laid down and used up by the organism.

Insects Defy Human Exploitation

Entomologists have often declared that insects have control over a greater percentage of the earth's surface than mankind, meaning that man and the domestic animals can occupy vast areas of the earth only at the risk of their lives.

The tsetse fly of Africa is an excellent example of such an insect. It is the carrier of the trypanosome of two deadly diseases: trypanosomiasis of man and nagana of horses and cattle. This fly (= *Glossina morsitans et al*) dominates about one-fourth of the continent of Africa, says the London correspondent of the *Journal of the American Medical Association* (Sept. 9, 1939). When discovered in 1901, it was estimated that the tsetse fly had killed more than 200,000 of the population of 300,000 natives. Whole tracts of the shores of Victoria Nyanza had to be abandoned and resettlement could be risked only in the last four years through unceasing efforts to control the insect, efforts which saved other tribes from extinction.

The same story applies to many other districts. In huge areas of the Congo, 80 per cent of the population suffers from trypanosomiasis, and the horses and cattle from nagana. Moreover, through opening up new country and improved transportation, the tsetse fly is spreading to new districts. Exterminating wild life as a control measure only turns the fly toward man and domestic animals.

The lesson taught by the tsetse fly is that before man can claim to be the captain of the world, he must first learn to control his insect enemies.

Commercial Research on Digestive Upsets of Dogs

In tests carried through four generations with three breeds at the Swift research kennels, more than 250 dogs have been fed an exclusive diet of commercial canned dog food and water. Not one of the dogs, while on the test, has shown any sign of dietary skin disturbance or any other digestive upset.

The Influence of Hydrogen-Ion Concentration on the Survival of Hog-Cholera Virus in Defibrinated Blood*

By R. M. CHAPIN, B.A., W. C. POWICK, B.S., C. N. McBRYDE, Ph.D., M.D., and
C. G. COLE, D.V.M.

SCANTY DATA have appeared on the survival of hog-cholera virus in an intermediate range of hydrogen-ion concentration between strong acidity and strong alkalinity. A preliminary official report¹ of the present investigation merely stated that virulence appeared to be optimally preserved at pH 5-5.5. Shortly after, Slavin² reported a loss of infectivity at both pH 1.4 and pH 13 but did not observe any variation within the range pH 4-10.8.

in the hope that the period of usefulness of commercial virus might be prolonged by a suitable adjustment of its pH value.

EXPERIMENTAL PROCEDURE

All determinations of pH values were made electrometrically by means of a standard glass-electrode equipment. Readings usually became constant within five minutes after the electrodes had been inserted into the sample.

TABLE I—Survival of infectivity of hog-cholera virus in defibrinated blood at approximately 25° C. in series I of experiments.

A—PHENOLATED BLOOD				B—GLYCERINATED BLOOD			
pH	RESULTS AFTER INDICATED PERIOD OF STORAGE (DAYS)			pH	RESULTS AFTER INDICATED PERIOD OF STORAGE (DAYS)		
	33	65	101		33	65	101
3.6	—	—	—	2.3	—	—	—
4.3	+	—	—	4.0	+	—	—
5.1	+	+	+	4.8	+	+	+
6.0	+	+	—	5.9	+	—	—
7.0	—	—	—	7.0	—	—	—
8.0	—	—	—	8.0	—	—	—
9.0	—	—	—	9.0	—	—	—

+ = infectivity; — = absence of infectivity. Each symbol represents a single pig.

The so-called simultaneous virus which is employed in conjunction with anti-hog-cholera serum for the permanent immunization of swine consists of defibrinated virulent swine blood to which a solution of a germicide has been added as a safeguard against bacterial contamination. A comprehensive survey of commercial virus as marketed early in 1937 indicated that its pH value seldom falls outside the range 7-7.4. The period during which the product retains a high degree of virulence and antigenic potency is inconveniently short. The present investigation was undertaken

For the first series of experiments, two lots of fresh virus were shipped to the Washington, D. C., laboratories from the experiment station of the biochemic division at Ames, Ia. Lot A was regular simultaneous virus, a mixture of nine volumes of defibrinated virulent blood with one volume of 5 per cent phenol solution. Lot B was a mixture of six volumes of defibrinated virulent blood with four volumes of glycerine, U. S. P. Each lot was subdivided and the sublots were adjusted to various pH values by the addition of solutions of either sodium hydroxide or hydrochloric acid, introduced slowly with constant stirring.

An obstacle to precise adjustment soon

*From the biochemic division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C., Beltsville, Md., and Ames, Iowa.

came to notice, namely, a drift toward neutrality during storage, comparatively rapid in the first few hours, but sometimes detectably in progress after several weeks. As a convenient convention, the pH value recorded for each subplot in this experiment was that determined two hours after its preparation. The sublots were stored in contiguity in a dark cupboard at a temperature of approximately 25° C. Samples of the various sublots were sent periodically to Ames for tests of infectivity. The doses employed were not very precise because of the physical character of some of the samples, but were roughly equivalent to 0.5-1 cc. of original defibrinated blood. The results are shown in table 1. Clearly, infectivity persisted longest at a pH value not far from 5.

It may be remarked that in table or text, wherever a sample is definitely classed as noninfective, it is to be understood that the pig upon which it was tested remained well for several weeks but subsequently displayed pronounced symptoms diagnostic of hog cholera after having been injected with virulent virus as a test of its susceptibility.

The second series of experiments comprised three sublots of phenolated virus prepared and stored in the same way as series 1A. The first tests were made after an interval of 63 days, at which time the sample at pH 4.5 had become noninfective, whereas those at pH 5.2 and 5.6 were still infective. Unfortunately, the two latter samples were again tested only after so long an interval that both had become inert.

For the third series of experiments a molar solution of acetic acid in 40 per cent glycerine solution was sent from Washington, D. C., to Ames, Iowa, with instructions to prepare straight glycerinated virus (60 volumes defibrinated blood, 40 volumes glycerine), to divide it into sublots, and to add to each subplot a prescribed proportion of the acetic acid solution, leaving one subplot unadjusted as a control. All sublots were to be held in contiguity under refrigeration. The dose for infectivity tests in each case was to be equivalent to 1 cc. of original defibrinated virus blood. Samples

of each adjusted lot were sent to Washington for the determination of pH values. The data on infectivity tests are given in table 2.

For certain reasons it appeared desirable to investigate the effect of high concentrations of urea upon the virus. Uhlenhuth³ and coworkers reported that the substance appeared to have little effect in 20 per cent concentration. Therefore, mixtures were made to contain, per 100 cc., 40 cc. of defibrinated virulent blood, 40 gm. of urea and 0.5 gm. of phenol, with sufficient acetic acid to reduce the pH value to about 6. The data on infectivity tests are given in table 3. Though infectivity appeared to be erratically retained, it certainly persisted for 22 days at room temperature and for 31 days in refrigerated material.

TABLE II—Survival of infectivity of hog-cholera virus in glycerinated defibrinated blood at refrigerator temperature in series 3 of experiments.

pH	RESULTS AFTER STORAGE (DAYS)				
	213	290	353	367	391
4.58	++	+	+		—
5.25	++	+	+		++
5.72	++	+	—	—	
Control*					

+ = infectivity; — = absence of infectivity. Each symbol represents a single pig.

*Original glycerinated blood, of unadjusted pH.

Incidentally, after loss of infectivity the product retained no significant antigenic power as a vaccine in one case even in a 20-cc. dose.

DISCUSSION

Apparently there exists a rather sharply optimal pH value for persistence of the virulence of hog-cholera virus in swine blood. The experimental data are sufficient only to bracket this optimal pH value within certain probable limits. The results of experiment 1A indicate that the optimal point probably lies above pH 5.1. The results of experiment 3 indicate that it probably lies below pH 5.25. All the other data are consistent with this range and the

rounded value, pH 5.2, may be taken as approximately correct.

Defibrinated blood at pH 5 soon becomes thick. The presence of phenol or of its homologues greatly accentuates the effect, and the simultaneous presence of 40 per cent of glycerine fails to render such a phenolated product sufficiently fluid to be acceptable for field use. The simple glycerinated product adjusted to pH 5 is not strongly bactericidal against certain possible contaminants of commercial virus. Therefore, the investigation has not yet opened the way for improvements of practical value.

TABLE III—Survival of infectivity of hog-cholera virus in presence of urea.

PREPARATION	HOW STORED	DAYS OF STORAGE	DOSE (CC.)	RESULT
1	Room temp.	22	1	++
	Room temp.	81	1	—
	Refrig.	133	10	+
	Refrig.	269	10	—
2	Refrig.	31	10	+
	Refrig.	62	10	—
	Refrig.	81	10	—*

+ = infectivity; — = absence of infectivity. Each symbol represents a single pig.

*This pig not tested later for susceptibility.

Storage at a high temperature is the most serious enemy of potent virus, even when its pH value is adjusted to the optimal point. The data in tables 1 and 2 indicate that virus may deteriorate four times as rapidly at moderate room temperature as in a refrigerator. Incidental to other work, it was observed that at incubator temperature, 37.5° C., defibrinated virulent blood at its natural pH value, preserved with either phenol or glycerine, lost infectivity shortly after one week; when adjusted to the optimal pH value it could remain infective for two weeks but apparently not for three weeks.

SUMMARY

A pH value near 5.2 appears sharply optimal for persistence of the infectivity of hog-cholera virus in defibrinated hog blood.

Obstacles to utilization of the finding in the commercial production of simultaneous virus are indicated.

In presence of 40 per cent of urea, the blood at pH 6 retained infectivity for at least 22 days at room temperature and for at least 31 days under refrigeration.

The supreme importance of storing simultaneous virus at a low temperature is emphasized.

References

- ¹Mohler, J. R.: Report of the Chief of the Bureau of Animal Industry, U. S. D. A. (1937), p. 25.
- ²Slavin, G.: The resistance of the swine fever virus to physical agencies and chemical disinfectants. *Jour. Comp. Path. & Therap.*, li (1938), pp. 213-224.
- ³Uhlenhuth, P., *et al*: Weitere untersuchungen über das wesen und die bekämpfung der schweinepest. *Arb. Kaiserl. Gesund.*, xxx (1909), pp. 217-329.

Medicine in Wartime

Improvements in medical science since the World War that are used in the present war include better methods of treating burns, portable x-ray apparatus, the storing of blood for transfusion, new anesthetics of the nonvolatile type, electric scalpels, and tetanus toxoid to prevent lockjaw.

All of these are available to the veterinary corps, which, in addition, will be able to prevent outbreaks of encephalomyelitis among army horses and mules. However, we remain without a means of preventing the greatest of wartime animal plagues—equine influenza.

Vitamin E in Wound Regeneration

Bartolomucci (abst., *Jour. A.M.A.*, Sept. 9, 1939) studied vitamin E orally administered in regard to its effect upon the healing of wounds. Laboratory animals fed a diet rich in this vitamin, a normal diet, and a vitamin-E-depleted diet were used. The animals of each group were killed and studied microscopically 10, 20, 30, 40 and 50 days from the beginning of the experiment.

It was found that vitamin E administered orally stepped up the healing in wounds of parenchymatous organs (liver, spleen), whereas a lack of it retarded healing. The retardation was obvious.

EDITORIAL

The use of language is not confined to its being the medium through which we communicate our ideas to one another; it fulfils a no less important function as an instrument of thought; not being merely its vehicle but giving it wings of flight.—Roget's Thesaurus.

Advertising Doctors

THE LETTERS received on the subject of advertising in telephone directories prove that such advertisements are disapproved by the better element of the profession. Herein are two of such letters, selected at random, confirming the contention that advertising doctors are pursuing an obnoxious practice that should be discontinued forthwith to prevent the veterinary branch of medicine from being branded as a cohort of advertising quacks. It is a fault that can not be syncretized in any degree whatsoever with the practice of any branch of medicine.

THE COST

One of these correspondents points out that classified advertisements in telephone directories alone must be costing the practitioners about \$100,000 annually—a sum that might be spent to much better advantage on necessities of professional life. Though we have never stopped to compute the total in dollars and cents, we do estimate that the figure in terms of lost respectability is much too low. In the vernacular of Isaac Walton, it is a pretty heavy sinker—a sinker too heavy to bear at this moment of veterinary history. Unless we cease and desist, our profession deserves to be boycotted by the other branches of medicine and other branches of the altruistic sciences.

Veterinary medicine by the very nature of its labors is much too vulnerable to stand up and face the contemporary branches of science under the load of any professional misbehavior. So, let us unite and stop it, and do it now.

Memphis, Tenn., is proud of having

planned and conducted a remarkably fine annual convention of our national association but, to us, the veterinarians of that city have reasons to be still more proud of their "clean" telephone directory. In view of the basic issue advertising doctors represent, it is not easy to understand why practitioners of many other cities can not see the errors of their ways. The letters (*ad hoc*) read:

To the Editor.—In the August issue of the JOURNAL there appears an editorial on page 222, entitled "A Grave Infection." Being, myself, a recent graduate and in practice, I can see how new men in certain localities might slip by the wayside and resort to advertisements such as cited in the article.

The enclosed circular exemplifies a point that I wish to bring to your attention. I am told, on good authority, that the doctor whose name appears on the mailing piece secured from the various city halls the names of dog owners and sent a circular to each of them. Does the A.V.M.A. look favorably on such tactics? I am in no way a competitor of this man but I do feel sorry for the practitioners who are affected by his actions. This doctor, incidentally, having secured his D.V.M. degree almost 20 years ago, does not have the alibi that he is a recent graduate.

I should like to see this particular topic stressed further in the JOURNAL. The so-called professional notice is, in my opinion, a vicious, unethical practice.

Respectfully,
A Fellow Member.

To the Editor.—Having read with interest your comment on page 222 of the August issue of the JOURNAL, pertaining to advertising, I should like to tell you a few facts about our activities here.

For years the veterinarians of Miami, Fla., have been engaged in a competitive (keeping up with the Joneses) policy of classified advertising, especially in the telephone directory.

About two years ago we formed the Dade County Veterinary Medical Society, the mem-

bership embracing all veterinarians in this area. One of our first acts was a resolution condemning all forms of display advertising. All such advertising was discontinued, and each member actually saved \$36 per year through the elimination of telephone advertising alone. In addition to cancelling directory insertions, we have avoided all contributions to "fly by night" society advertising, which is expensive and unproductive.

In my opinion, the formation of local societies would be of great economical and professional benefit. These groups would also function as institutions for bettering society as a whole because, as it has been said, "To know a man is to love him." It is almost impossible to criticize a colleague when one really knows him.

Cordially yours,
E. D. Clawson, U.S.C.V.S. '16.

The Section on Surgery

FOR REASONS that no one will ever be able to explain rationally, the section on surgery some years ago was unceremoniously thrown out of the Association's organization. Presumably, it was thought that the day devoted to the art of surgery (the clinic) was quite sufficient attention to pay to that branch of veterinary medicine. The reasoning that caused the Executive Committee to discard surgery as a section of the Association was quite ill-advised—plebian, to say the least—for there is a science of surgery as well as an art. While medical societies were enlarging their surgical studies and even forming national surgical societies, the American College of Surgery, for example, organized veterinary medicine was throwing its surgical lever into reverse gear.

To compensate in part for this backward step, the JOURNAL is going to establish a section, entitled "Surgical Data" or some more appropriate name, where this branch will have an open forum for its advancement. Not to have had a clearing house for the knowledge of animal surgery all these years has been a serious omission—a costly one to the owners of animals and a tremendous loss to the income of the practitioners. Surgery is a salvage unit of great importance to animal production, an outstanding means of demonstrating the superiority of the college-trained over the

untrained doctor and, last but not the least practical, it is one of the practitioner's main sources of income.

Discarding the section on surgery was unfair to the professors of surgery in the veterinary colleges. It could have left the impression, and perhaps did, that their field was an unimportant fringe of the curriculum. Yet, in spite of the handicap, these men have stood out from the crowd more prominently than any other group of teachers. Their students speak of them in the highest terms, their reports are appreciated by the journals, and everywhere the state, local and national associations seek them out as contributors to their programs.

Those who attended the Memphis meeting will remember the work of Wegner, Stroup, Fowler, Frick, Sigler, Anderes, Zepp and others long after all the rest of the contributors to the program have been forgotten. They are surgeons—men who know the science, the art, and the economic value of their specialty.

When will the surgical section of the JOURNAL be started? Not later than January 1; perhaps before. The section is being organized now.

Tables in Articles

IN ORDER to make room for reading material of general interest, contributors to the JOURNAL are requested to restrict the number and the dimensions of tabulated material in their articles.

Edifying as tables may be, the fact remains that the space required for them is a hindrance to the revamping of the JOURNAL directed by the reorganizing Committee of the Executive Board.

This is not an arbitrary suggestion of the central office, but one made after consulting the associate editors and others familiar with the program of making the Association more useful to greater numbers.

Nor is this a request to abolish the use of tables entirely. It is just a plea to be reasonable in this regard—to reduce to a few sentences, when possible, the information portrayed in space-consuming tabulations.

United States Live Stock Sanitary Association

Announcement

THE FOLLOWING is the roster of officers and committee chairmen of the United States Live Stock Sanitary Association, which will hold its 43rd annual meeting at the Morrison Hotel, Chicago, Ill., December 6-8, 1939:

OFFICERS

President: J. L. Axby, Indianapolis, Ind.

Vice-Presidents: H. D. Port, Cheyenne, Wyo., 1st; I. S. McAdory, Auburn, Ala., 2nd; F. A. Zimmer, Pataskala, Ohio, 3rd.

Secretary-Treasurer: L. A. Merillat, 221 North La Salle St., Chicago, Ill.

COMMITTEE CHAIRMEN

Legislation: H. E. Curry, State Veterinarian, Jefferson City, Mo.

Resolutions: D. M. Campbell, 7632 S. Crandon Ave., Chicago, Ill.

Policy: W. J. Butler, State Veterinarian, Helena, Mont.

Revision of Constitution and By-Laws: Marvin R. Hales, Olympia, Wash.

Unification of Laws and Regulations: W. H. Hendricks, State Veterinarian, Salt Lake City, Utah.

Bang's Disease: C. P. Fitch, University Farm, St. Paul, Minn.

Tuberculosis: C. U. Duckworth, California State Department of Agriculture, Sacramento, Calif.

Transmissible Diseases of Swine: C. N. McBryde, U. S. Bureau of Animal Industry, Ames, Iowa.

Parasitic Diseases: Benj. Schwartz, U. S. Bureau of Animal Industry, Washington, D. C.

Meat and Milk Hygiene: A. F. Schalk, College of Veterinary Medicine, Ohio State University, Columbus, Ohio.

Tick Eradication: T. O. Booth, State Veterinarian, Fort Worth, Texas.

Transmissible Diseases of Poultry: Erwin Jungherr, College of Agriculture, Storrs, Conn.

Rabies: H. W. Schoening, U. S. Bureau of Animal Industry, Washington, D. C.

Poultry and Rabbit Meat Inspection: L. M. Hurt, Union Stock Yards, Los Angeles, Calif.

Advisability of Issuing Livestock Regulatory Reports Biannually: M. Jacob, University of Tennessee, Knoxville, Tenn.

Laws and Regulations Governing Interstate Movement of Live Stock, etc.: W. H. Lytle, State Veterinarian, Salem, Ore.

Program: L. A. Merillat, 221 North La Salle St., Chicago, Ill.

Committee chairmen are requested to communicate with their respective committee members on the names of contributors and titles which are to be announced on the official program. November 1 is the deadline for the receipt of this information, as plans have been laid for mailing the program on or before November 15. Prompt attention to this request will be appreciated.

Please send communications on material to be printed in the program to the secretary, 221 North La Salle St., Chicago, Ill.

J. L. AXBY, *President,*

L. A. MERILLAT, *Secretary.*

Self-Sufficient America

WITH WAR raging in Europe and shipping almost at a standstill, the questions might be asked, "What will be the effect upon industry? Do we produce all of the raw materials or does this country still depend upon other countries for certain necessary supplies? Such was true in the case of the last war, but the present conflict is another story. And for this, the United States is in a large measure indebted to the organic chemist. In 1914, we depended upon Chile for nitrates, Germany for dyes and potash, and the tropics for rubber. Europe was the only source of fine optical glass, and camphor was in the clutches of a foreign monopoly. Bristles came from the far corners

of the world—from the hogs of China and Siberia.

Today, with a possible worldwide conflict threatening, we are in a much improved situation. Camphor is produced synthetically from southern turpentine at about 48 cents a pound and may be compared to the monopoly price of \$3.65. There is now a synthetic substitute for bristles, called nylon, which is also used in the manufacture of surgical suture material and will soon provide yarn for hosiery, the latest triumph for the organic chemist. A quarter of a century ago the United States produced less than one-tenth of the dyes it consumed but, today, all but a trifling fraction of our needs are produced at home. This also includes fine chemicals that were so dear during the World War. In 1914, this country did not have a single plant to extract nitrogen from the air and transform it into nitrates and other chemicals vital to agriculture, industry and national defense. Today, we are self-sufficient in nitrates, thanks to chemistry.

Chemical rubber produced from coal, limestone and salt has every promise of functioning in the place of natural rubber. In some instances it is even superior to natural rubber. Its price based on a small production is less than the cost of natural rubber during the early World War days.

These are only a few examples of the progress made during the past quarter of a century to make our great country self-sufficient. If war must come, we can be assured that our industries will not be disrupted for want of necessary materials or our people deprived of vital medicines.

Rabies Problem Nears Solution

THE RABIES QUESTION is approaching solution. The events of recent months are the proof. True friends of the dog will find it quite difficult to fit the word "racket" into the general scheme of control recommended by the American Kennel Club and the American Veterinary Medical Association, the two bodies which have thrown the subject wide open for discussion.

The main gain made in the past several weeks lies in the fact that rabies is now a recognized entity. Those who once

claimed in widely publicized articles that rabies is but a myth have been outvoted. The disease is not only admitted to be a grave infection of animals and man but one that should be systematically handled by the veterinary service—federal and state. The resolutions approved by both of these bodies are alike in principle. Both agree that rabies is an infectious disease, that its eradication is feasible and that the planning and police work should be carried out by the service qualified and equipped to accomplish the end desired.

The special Committee on Rabies read a majority and a minority report into the records. The minority report was not approved and the majority report was referred to the Committee for further research on vaccination. Both of the reports were limited to a discussion of vaccination.

The recommendation on the whole subject of rabies is printed elsewhere in this issue. Properly, it approves vaccination as an "accessory agent of control." Meanwhile, the public press is being flooded by antivaccinationists with selected squibs from this open discussion that fit only their side of the case, instead of falling wholeheartedly into a plan that will prevent the dog from becoming an increasingly unpopular domestic animal.

The recommendations of the A.V.M.A. and of the American Kennel Club are as sound as misinterpretations of them are unwise, for in the end the truth and common sense will out.

Board of Governors

WHAT WAS ONCE the reorganizing committee, which was formed at the Omaha meeting (1937), will become the Board of Governors under the new constitution and by-laws which will be published in the November issue of the JOURNAL and presented for final adoption at the 1940 meeting in Washington, D. C.

The Board will be composed of the chairman of the Executive Board, the president, and the president-elect. Its duty will be to supervise closely the affairs of the Association throughout the year.

APPLICATIONS

The ever-climbing popularity of the Association is convincingly attested in the following enrollment of 109 applicants for membership—an alltime record for the month of October. The unprecedented growth of the A.V.M.A. in the past few months has already permitted an expansion of services to the members and the inauguration of broad projects which, when completed, will benefit the entire profession.

First Listing*

ABRAHAM, MAX C.

Box 203, Edon, Ohio.

D. V. M., Michigan State College, 1933. Vouchers: W. R. Krill and E. B. Ingmand.

AIERN, THOMAS J.

62 White St., Hartford, Conn.

D. V. M., U. S. College of Veterinary Surgeons, 1918. Vouchers: R. L. Smith and G. E. Corwin.

ANDERSON, DONALD B.

Sparta, Tenn.

D. V. M., Texas A. & M. College, 1929. Vouchers: Elmer B. Parker and E. B. Ingmand.

AY, ROBERT J.

6245-33 North East, Seattle, Wash.

B. S., D. V. M., State College of Washington, 1939. Vouchers: Lt. Col. H. K. Moore and Capt. Wayne O. Kester.

BAIN, ALEXANDER F.

Ontario Veterinary College, Guelph, Ont., Canada.

B. V. Sc., V. S., Ontario Veterinary College, 1933. Vouchers: A. E. Cameron and E. B. Ingmand.

BARTH, ORRIN E.

2314 N. 24th St., Birmingham, Ala.

M. D. C., Chicago Veterinary College, 1910. Vouchers: S. D. Hall and G. H. Randall.

BEGGS, STUART WILLIAM

Lamar, Colo.

D. V. M., Colorado State College, 1915. Vouchers: L. A. Merillat and Jay H. Bouton.

BELL, WILLIAM THOMAS

Box 135, Douglasville, Ga.

D. V. M., Texas A. & M. College, 1938. Vouchers: R. P. Marsteller and Chas. C. Rife.

BENDIXEN, HANS C.

Magnoliavej 53, Copenhagen, Denmark.

D. V. M., Royal Veterinary a. Agricultural College, Copenhagen, 1921. Vouchers: A. Eichhorn and Harry W. Schoening.

BLACK, JEAN JAURES

Sauk Centre, Minn.

D. V. M., Texas A. & M. College, 1939. B. S., Cornell University, 1936. Vouchers: R. P. Marsteller and C. P. Fitch.

BLUMENSHIME, EMIL LEE

Washington, Ill.

D. V. M., Saint Joseph Veterinary College, 1918. Vouchers: L. A. Merillat and E. B. Ingmand.

BOWERS, GRAFTON D.

326 Post Office Bldg., Baton Rouge, La.

D. V. M., Kansas State College, 1938. Vouchers: Dudley D. Conner and Edwin J. Frick.

BOYD, HOMER C.

Pine Bluff, Ark.

D. V. M., Kansas State College, 1921. Vouchers: C. D. Stubbs and J. C. Young.

BOYD, WALTER ALAN

Box 66, Hackettstown, N. J.

D. V. M., Cornell University, 1932. Vouchers: M. K. Mann and E. R. Cushing.

CARLE, BIRDSALL N.

1135 - 3rd St., Porterville, Calif.

B. S., D. V. M., State College of Washington, 1939. Vouchers: E. E. Wegner and J. E. McCoy.

CASSIDY, DONALD L.

507 Federal Bldg., Little Rock, Ark.

D. V. M., Kansas State College, 1938. Vouchers: Robert K. Benn and E. J. Frick.

*See January 1939 JOURNAL.

- CLARK, G. R.
222 Bird St., Hannibal, Mo.
M. D. V., McKillip Veterinary College, 1917.
Vouchers: W. B. Holmes and Ashe Lockhart.
- COATES, FRED B.
Dobson, N. Car.
D. V. M., Ohio State University, 1938. Vouch-
ers: J. H. Brown and E. B. Ingmand.
- CURRY, ORAL B.
Morristown, Ind.
D. V. M., Ohio State University, 1925. Vouch-
ers: C. C. Donelson and Walter K. York.
- CURTIS, R. E.
Ransom, Ill.
M. D. V., McKillip Veterinary College, 1908.
Vouchers: D. M. Smith and E. B. Ingmand.
- DANFORTH, ARNO
701 W. Franklin St., Winchester, Ind.
D. V. M., Ohio State University, 1929. Vouch-
ers: Walter K. York and E. B. Ingmand.
- DAVENPORT, ROY FRANKLIN
3810 Spruce St., Philadelphia, Pa.
V. M. D., University of Pennsylvania, 1932.
Vouchers: Vincent C. Moyer and William H.
Ivens.
- DAVIS, FRANK C.
Kenneth, Mo.
D. V. M., Saint Joseph Veterinary College,
1920. Vouchers: A. T. Kinsley and E. B.
Ingmand.
- DECKER, H. L.
College Corner, Ohio.
D. V. M., Michigan State College, 1936. Vouch-
ers: O. B. Hess and J. B. Hollenbeck.
- DEMPSEY, OBE GARDNER
107 Cherry St., Greenville, Ky.
D. V. M., Indiana Veterinary College, 1913.
Vouchers: A. S. Barnes and O. S. Crisler.
- DEMSEY, H. W.
238 E. Washington St., Huntington, Ind.
D. V. M., Indiana Veterinary College, 1914.
Vouchers: E. B. Ingmand and L. A. Merillat.
- EATMAN, OVID R.
Gadsden, Ala.
M. D. V., McKillip Veterinary College, 1909.
Vouchers: C. C. Middleton and G. D. Ingram.
- EDDINS, SAMUEL GRAVES
Box 225, Woodstock, Va.
D. V. M., Cornell University, 1938. Vouchers:
A. J. Sipos and L. A. Merillat.
- EWING, ROBERT ARTHUR
228 W. Main St., Canfield, Ohio.
D. V. M., Ohio State University, 1935. Vouch-
ers: W. F. Guard and Jas. D. Grossman.
- FERREE, EARL
Danville, Ind.
D. V. M., Indiana Veterinary College, 1914.
Vouchers: Walter K. York and E. B. Ing-
mand.
- FITTIPALDI, SILVIO ANTHONY
121 White Horse Pike, Collingswood, N. J.
D. V. M., Alabama Polytechnic Institute, 1937.
Vouchers: D. Dallas Ruch and R. A. Hender-
shott.
- FLETCHER, M. M.
2001 S. Lincoln St., Springfield, Ill.
M. D. C., Chicago Veterinary College, 1906.
Vouchers: C. L. Campbell and E. B. Ingmand.
- FOWBLE, JOHN CARROLL
Timonium, Md.
V. M. D., University of Pennsylvania, 1937.
Vouchers: Mark Welsh and L. J. Poelma.
- GALLOWAY, HENRY PAUL
Cortez, Colo.
D. V. M., Colorado State College, 1938. Vouch-
ers: T. I. Means and I. E. Newsom.
- GIESKE, ALBERT GEORGE
312 Grove St., Barrington, Ill.
M. D. C., Chicago Veterinary College, 1906.
Vouchers: E. B. Ingmand and L. A. Merillat.
- GOODMAN, L. J.
Norton, Kans.
D. V. S., Kansas City Veterinary College,
1912. Vouchers: R. F. Coffey and E. B.
Ingmand.
- GREDDINGER, ERIC
Georgetown, S. Car.
D. V. M., Veterinary College of Berlin, 1933.
Vouchers: George S. Jones and Herbert
Racoff.
- HAIGLER, GILBERT N.
7645 Delmar Blvd., Saint Louis, Mo.
D. V. M., Ohio State University, 1933. Vouch-
ers: L. A. Merillat and J. V. Moore.
- HAMBRICK, G. WALTER
Princeton, W. Va.
D. V. M., Indiana Veterinary College, 1911.
Vouchers: S. E. Hershey and E. B. Ingmand.

HANDER, RAYMOND T.

Belton, Texas.

D. V. M., Texas A. & M. College, 1938. Vouchers: D. M. Campbell and H. Schmidt.

LOVE, WILLIAM GRAHAM

7120 Lincoln Drive, Philadelphia, Pa.

V. M. D., University of Pennsylvania, 1933. Vouchers: E. T. Booth and E. B. Ingmand.

HANSON, ELMO WALTER

2201 Texas St., El Paso, Texas.

M. D. C., Chicago Veterinary College, 1906. Vouchers: Matthew E. Gleason and L. A. Merillat.

McCLURE, JOHN FREMONT

5200 Rhode Island Ave., Hyattsville, Md.

D. V. M., Ohio State University, 1931. Vouchers: L. J. Poelma and Wm. R. Crawford.

HULL, JAMES E.

207 S. Green St., Longview, Texas.

D. V. M., Texas A. & M. College, 1938. Vouchers: R. P. Marsteller and Ben F. Green.

McCRACKEN, WILLIAM ALLEN

1621 Queen St. W., Toronto, Ont., Canada.

B. V. Sc., V. S., Ontario Veterinary College, 1938. Vouchers: W. Moynihan and G. A. Rose.

HINSON, L. J.

McGehee, Ark.

D. V. M., Terre Haute Veterinary College, 1916. Vouchers: C. D. Stubbs and E. B. Ingmand.

McKINNEY, E. BELTON

Box 355, Dyersburg, Tenn.

D. V. M., Alabama Polytechnic Institute, 1936. Vouchers: E. B. Parker and H. M. O'Rear.

HORNSBY, WILL SYDNEY

Lafayette, La.

D. V. M., Kansas State College, 1932. Vouchers: John H. Gillmann and J. W. Scheibler.

MILLER, EDWIN L.

Ripley, W. Va.

B. V. Sc., V. S., Ontario Veterinary College, 1918. Vouchers: S. E. Hershey and Guy N. Welch.

KEPNER, R. E.

New Castle, Ind.

D. V. M., McKillip Veterinary College, 1913. Vouchers: J. L. Axby and Charles C. Dobson.

MILLER, L. A.

Menasha, Wis.

M. D. C., Chicago Veterinary College, 1916. Vouchers: W. Wisnicky and E. B. Ingmand.

KETCHERSID, JAMES R.

College Station, Texas.

B. S., D. V. M., Kansas State College, 1935, 1937. Vouchers: W. G. Brock and R. T. Dickinson.

MOMMSEN, PETER HENRY

588 E. Davant St., Memphis, Tenn.

D. V. M., Chicago Veterinary College, 1916. Vouchers: C. P. Branigan and W. L. Gates.

KOOSTRA, ANDREW

226-11th St., Bowling Green, Ky.

D. V. M., Iowa State College, 1938. Vouchers: Floyd E. Hull and Bernard J. Errington.

MONROE, FLOYD E.

1094 McCallie Ave., Chattanooga, Tenn.

D. V. M., Kansas State College, 1937. Vouchers: E. B. Ingmand and John H. Gillmann.

KORD, CLEMENS EDWARD

1209 Gale Ave., Nashville, Tenn.

D. V. M., Terre Haute Veterinary College, 1912. Vouchers: John E. Bender and John H. Gillmann.

MOORE, JOE H.

751 Meeting St., Charleston, S. Car.

D. V. M., Ohio State University, 1920. Vouchers: W. A. Barnette and J. L. Hopping.

KROGER, HERMAN J.

4944a Sutherland Ave., Saint Louis, Mo.

D. V. M., Ohio State University, 1925. Vouchers: Milton R. Fisher and E. B. Ingmand.

MULLOWNEY, PATRICK H.

1 Vista St., Boston, Mass.

M. D. V., Harvard Veterinary School, 1891. Vouchers: H. W. Jakeman and E. B. Ingmand.

LOMBARD, ROLAND ARNOLD

2285 Commonwealth Ave., Auburndale, Mass.

B. V. Sc., V. S., Ontario Veterinary College, 1936. Vouchers: L. A. Paquin and R. H. Sewell.

NOLAN, ALFRED FRANCIS

University of Kentucky, Lexington, Ky.

D. V. M., Cornell University, 1937. Vouchers: F. E. Hull and D. W. Bruner.

NORMAN, CHAUNCEY THEODORE

2965 N. E. Sandy Blvd., Portland, Ore.
D. V. S., Kansas City Veterinary College, 1911.
Vouchers: Wm. H. Lytle and A. T. Kinsley.

OETTIKER, RUSSELL L.

908 S. Central, Marshfield, Wis.
D. V. M., Iowa State College, 1937. Vouchers:
James S. Healy and W. R. Winner.

OSTEEN, WILSON MARSHALL

Ahoskie, N. Car.
D. V. M., Kansas State College, 1935. Vouch-
ers: J. H. Brown and Wm. Moore.

PARKER, R. H.

Wilkinson Blvd., Charlotte, N. Car.
D. V. S., Kansas City Veterinary College, 1912.
Vouchers: A. A. Husman and E. L. Shuford.

PARSONS, ELTON V.

Emporia, Kans.
D. V. M., Kansas State College, 1938. Vouch-
ers: E. J. Frick and John H. Gillmann.

PETERS, I.

Fordyce, Ark.
D. V. M., Terre Haute Veterinary College,
1912. Vouchers: C. D. Stubbs and E. B.
Ingmand.

POULIN, HOWARD CARTER

40 Webster St., Nashua, N. H.
B. V. Sc., V. S., Ontario Veterinary College,
1938. Vouchers: Harold M. Lewis and Gerald
W. Holmberg.

PRICE, CHARLES DUDLEY

Box 1721, Charleston, W. Va.
D. V. M., Alabama Polytechnic Institute, 1936.
Vouchers: J. H. Rietz and Earl N. Moore.

RICH, GEORGE C.

Box 855, Austin, Texas.
D. V. M., Texas A. & M. College, 1936. Vouch-
ers: R. P. Marsteller and W. D. McCuiston.

RILE, E. BARCLAY

Skippack Pike, Blue Bell, Pa.
V. M. D., University of Pennsylvania, 1939.
Vouchers: F. E. Lentz and Wm. J. Lentz.

ROMIGH, FRED E.

Elmdale, Kans.
D. V. S., Kansas City Veterinary College,
1909. Vouchers: R. F. Coffey and L. A.
Merillat.

ROSNER, LEONARD A.

5025a Mardel, Saint Louis, Mo.
D. V. M., Kansas State College, 1934. Vouch-
ers: Ashe Lockhart and E. B. Ingmand.

SADOW, IRVING J.

Cleveland, Tenn.
D. V. M., Alabama Polytechnic Institute, 1937.
Vouchers: D. C. Coughlin and J. M. Higgins.

SCHOTT, FRANCIS JOSEPH

Box 398, Palestine, Texas.
D. V. M., Texas A. & M. College, 1937. Vouch-
ers: E. B. Ingmand and Matthew E. Gleason.

SEEVERS, FRED L.

Pleasant Hill, Mo.
D. V. M., Kansas City Veterinary College,
1915. Vouchers: A. T. Kinsley and E. B.
Ingmand.

SHERMAN, HARRY LOUIS

Box 191, Willimantic, Conn.
B. S., D. V. M., Ohio State University, 1938.
Vouchers: Erwin Jungherr and G. E. Corwin.

SHIPMAN, CLARENCE E.

Tiffin, Ohio.
D. V. M., Grand Rapids Veterinary College,
1915. Vouchers: O. B. Hess and J. B. Hol-
lenbeck.

SIRESS, JAMES

Cleveland, Tenn.
D. V. M., Terre Haute Veterinary College,
1912. Vouchers: John H. Gillmann and E. B.
Ingmand.

SMITH, HUGH DOWD

1547 W. Clinch Ave., Knoxville, Tenn.
D. V. M., Alabama Polytechnic Institute, 1936.
Vouchers: H. W. Hayes and D. Coughlin.

SPEERS, C. H.

Stanberry, Mo.
D. V. M., Saint Joseph Veterinary College,
1910. Vouchers: C. L. Reece and K. Sears.

STALLWORTH, C. G.

Drew, Miss.
D. V. M., Kansas City Veterinary College,
1913. Vouchers: M. J. Luster and J. A.
Barger.

STANLEY, PAUL R.

Acton, Ind.
D. V. M., Ohio State University, 1926. Vouch-
ers: J. L. Axby and E. B. Ingmand.

STAPLETON, SYDNEY FRANKLIN

605 Harrold Ave., Americus, Ga.
D. V. M., Ohio State University, 1922. Vouch-
ers: Chas. C. Rife and J. L. Hopping.

SIEFANSKI, ANTHONY M.

Wiggins, Miss.

V. M. D., University of Pennsylvania, 1936.

Vouchers: Hartwell Robbins and L. A. Merillat.

STEINBACH, KARL FRIEDRICH

Tierartzlichen Schule, Universitat von Zurich, Switzerland.

V. M. D., University of Pennsylvania, 1939.

Vouchers: E. B. Ingmand and F. G. Steinbach.

STEINMETZ, WILLIAM EDWARD

3432 Sheffield Ave., Oakland, Calif.

B. S., D. V. M., Washington State College,

1939. Vouchers: F. H. McNair and J. W. Roberts.

STEPHENS, GEORGE WRENSHAL

Blacksville, W. Va.

D. V. M., McKillip Veterinary College, 1913.

Vouchers: S. E. Hershey and H. M. Newton.

STERN, AARON I.

68 Charles St., Meriden, Conn.

D. V. M., Ohio State University, 1933. Vouch-

ers: G. E. Corwin and J. Douglas Winn.

SULTS, AMOS WATERS

9 East Broad St., Hopewell, N. J.

V. M. D., University of Pennsylvania, 1935.

Vouchers: J. G. Hardenbergh and J. H. Spurlock.

TAYLOR, THEODORE FRED

133 W. Court St., Warsaw, N. Y.

D. V. M., Cornell University, 1924.

Vouchers: F. F. Fehr and F. E. McClelland.

TILMAN, O. W.

1619 Main St., Trenton, Mo.

D. V. S., Kansas City Veterinary College,

1909. Vouchers: H. E. Curry and E. B. Ingmand.

TINDER, J. E.

Brook, Ind.

D. V. M., McKillip Veterinary College, 1915.

Vouchers: Walter K. York and J. C. Schoenlaub.

TOROROVIC, VALERIAN

Glenwood Springs, Colo.

D. V. M., Colorado State College, 1927.

Vouchers: I. E. Newsom and E. N. Stout.

VENABLE, JOSEPH W.

955 Forest Ave., Gadsden, Ala.

M. D. C., Chicago Veterinary College, 1915.

Vouchers: W. E. Cotton and R. E. Jackson.

VENZKE, CARL E.

227 Sheldon, Ames, Iowa.

D. V. M., Iowa State College, 1936. Vouchers:

H. D. Bergman and E. B. Ingmand.

WALCHER, CHARLES EDWIN

Witt, Ill.

D. V. M., Chicago Veterinary College, 1910.

Vouchers: A. E. Bott and J. P. Torrey.

WALKER, WILLIAM KENNETH

Box 21, Jerome, Idaho.

D. V. M., Colorado State College, 1932.

Vouchers: Harold Propp and A. K. Kuttler.

WEISBERG, VICTOR

Europa, Miss.

D. V. M., Alabama Polytechnic Institute,

1939. Vouchers: S. H. Dorfman and E. S.

Brashier.

WELLES, E. H.

Dyersburg, Tenn.

D. V. M., Alabama Polytechnic Institute, 1917.

Vouchers: John H. Gillmann and O. B. Neely.

WELLS, JOHN LYLE

1817 Holmes St., Kansas City, Mo.

D. V. M., Kansas City Veterinary College,

1915. Vouchers: Ashe Lockhart and L. A. Merillat.

WEST, JOHN L.

446 N. Gay, Auburn, Ala.

D. V. M., Kansas State College, 1936. Vouch-

ers: Heath McKenzie and E. B. Ingmand.

WHITAKER, ROSS LANDESS

Fayetteville, Tenn.

D. V. M., McKillip Veterinary College, 1917.

Vouchers: Elmer B. Parker and John H. Gillmann.

WILLIAM, NEWCOMB L.

College Corner, Ohio.

D. V. M., Cincinnati Veterinary College, 1913.

Vouchers: N. D. Backus and J. B. Hollenbeck.

WILLIAMSON, E. C.

Montpelier, Ind.

D. V. M., Indiana Veterinary College, 1915.

Vouchers: T. A. Sigler and J. C. Schoenlaub.

WIRT, F. G.

806 Jackson Ave., Thibodeau, La.

D. V. M., Indiana Veterinary College, 1911.

Vouchers: W. T. Oglesby and E. B. Ingmand.

YAGER, GEO. F.
Sauk Centre, Minn.
D. V. M., McKillip Veterinary College, 1915.
Vouchers: A. L. Walsh and Howard C. H. Kernkamp.

ZUERCHER, VILAS W.
Route 1, Medina, Ohio.
D. V. M., Ohio State University, 1936. Vouchers: W. F. Guard and Jas. D. Grossman.

ZISKIND, MORRIS L.
1190 Paterson Plank Road, Secaucus, N. J.
V. M. D., University of Pennsylvania, 1936.
Vouchers: Bert Reinow and G. A. Dick.

Second Listing

Adler, Daniel A., 831 W. Milford St., Glendale, Calif.

Arnold, John J., 418 S. 15th St., New Castle, Ind.

Arrington, Mike A., Forrest City, Ark.

Balle, Edwin G., 8642-56th Ave., Elmhurst, N. Y.

Bauer, Charles F. W., Florissant, Mo.

Berry, John William, Pulaski, Tenn.

Boen, Nels Theodore, Harmony, Minn.

Bissell, Roy C., Postal, N. Dak.

Bradley, Walter B., Caledonia, Mich.

Brenner, Carl F., 330 Marshall Ave., Webster Groves, Mo.

Busic, William H., 3653—9th Ave., Los Angeles, Calif.

Cochran, Willard Nelson, Route 2, Flat Rock, Ill.

Coffee, W. M., La Center, Ky.

Conger, Clifford V., Kahoka, Mo.

Creighton, Sterling H., Coffey, Mo.

Davis, Elmer Nelson, 221 E. 74th St., Kansas City, Mo.

Earl, John Wyckoff, Hillside Ave., Bedminster, N. J.

Eveleth, Donald F., Veterinary Research Institute, Iowa State College, Ames, Iowa.

Favara, John Boyd, Greenville, Miss.

Fawcett, Jefferson Fred, Princeton, Ill.

Feinberg, Joseph George, 2632 Troost Ave., Kansas City, Mo.

Fesler, James R., 52 Court St., Janesville, Wis.

Fike, Howard Samuel, Medina, Mich.

Flanigan, J. A., Eugene, Ore.

Griner, Adalai Bee, Box 203, Fitzgerald, Ga.

Grossman, Henry Earle, 418 E. 23rd St., Brooklyn, N. Y.

Guthrie, Chester Earle, Silvermine, Norwalk, Conn.

Hectorne, Ronald Lester, 37 Lake St., Bridge-ton, N. J.

Herzer, Philip Charles, 816 S. San Pedro, Los Angeles, Calif.

Hirschey, Wilbur C., 1216 North Eaton St., Albion, Mich.

Hughes, Lynn B., Box 81, Waskom, Texas.

Immenschuh, Aldie Philip, Route 2, Box 631, San Diego, Calif.

Isbell, Roberta George, Box 323, Gadsden, Ala.

Johnson, Harry Paul, 332 N. Harrison, East Lansing, Mich.

Johnson, Norman Edward, 520½ S. Virgil St., Los Angeles, Calif.

Jones, Frederick Clifford, Macomb, Ill.

Kelly, Stephen G. C., 1201 S. A St., Elwood, Ind.

Leonard, Ellis P., Box 432, Summit, N. J.

Major, Fred J., Box 274, College Station, Texas.

Mayo, Robert Henry, Forest, Miss.

McCoy, Edward Joseph, Hickory, N. Car.

Meisner, Frank Columbus, 1035 Marietta St. N. W., Atlanta, Ga.

Miner, Nathan, 3437 Fulton, Brooklyn, N. Y.

Mingle, Carroll Kirkham, 520 Hunter Ave., College Park, Md.

Moore, Hubert Otis, 203 Hemphill St., Hattiesburg, Miss.

Moore, John Herbert, 22 E. Junipero St., Santa Barbara, Calif.

Moore, Jules Verne, Hayt, Mo.

Morris, Robin Roy, Room 6, War Memorial Bldg., Nashville, Tenn.

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The amount that should accompany an application filed this month is \$6.25. This covers membership fee and dues to January 1, 1940, including subscription to the JOURNAL.

CLINICAL DATA

Some Observations on a Chemical Test for Pregnancy in Mares*

By L. B. SHOLL, B.S., D.V.M., and G. E. DERSHAM, D.V.M.

East Lansing, Mich.

THE RESULTS presented below were obtained by using a modification of the chemical test of Cuboni.¹

Urine to be tested is filtered through filter paper. Five cc. of the filtered urine is placed in a test tube and 1 cc. of concentrated hydrochloric acid added. The tube is placed in a boiling-water bath for ten minutes and is then cooled in running water.

corked, shaken thoroughly and examined by reflected light or by means of a small flashlight.

The sulfuric acid layer becomes dark brown. If the animal is pregnant, there is green fluorescence noted in this layer by reflected light. In negative cases it shows no green fluorescence.

It is believed that pregnancy must be of

CASE	DATE BRED	DATE TESTED	DAYS AFTER BREEDING	CHEMICAL TEST	PHYSICAL EXAMINATION	SUBSEQUENT HISTORY
1	8/2/37	10/5/37	64	Negative	Negative	Foaled 5/28/38
2	6/18/37	10/8/37	112	Negative	Negative	Nonpregnant
3	8/10/37	10/8/37	59	Negative	Positive	Foaled 4/20/38
3	8/10/37	10/13/37	64	Negative	Positive	Foaled 4/20/38
4	7/29/37	10/10/37	72	Negative	Positive	Sold; pregnant
4	7/29/37	10/22/37	84	Positive (?)	Positive	Sold; pregnant
5	4/13/37	10/11/37	181	Positive	Positive	Sold; pregnant
6	5/12/37	10/12/37	153	Positive	Positive	Sold; pregnant
7	6/12/37	10/13/37	123	Positive	Positive	Sold; pregnant
8	7/29/37	10/6/37	69	Negative	Negative	Sold; pregnant
9	5/17/37	10/13/37	149	Positive	Positive	Sold; pregnant
10	5/3/37	10/13/37	153	Positive	Positive	Sold; pregnant
11	5/8/37	10/18/37	153	Positive	Positive	Sold; pregnant
12	6/9/37	10/22/37	135	Negative	Negative	Nonpregnant
13	5/5/37	10/22/37	170	Positive	Positive	Sold; pregnant
14	4/13/37	10/22/37	192	Positive	Positive	Sold; pregnant
15	7/12/37	10/25/37	105	Positive	—	Sold; pregnant
16	8/18/37	10/25/37	68	Negative	—	Nonpregnant
17	8/12/37	10/25/37	74	Negative	—	Nonpregnant

Six cc. of benzene is added and the tube is vigorously shaken to obtain good extraction. After allowing the benzene to separate, this is drawn off by means of a pipette equipped with a rubber bulb and placed in another test tube. To this is added 1 cc. of concentrated sulfuric acid. The tube is then placed in a water bath at 70° to 90° C. for four to five minutes, shaking the tube several times during the heating. The tube is

about 90-day duration before positive results are obtained with this test and that the test remains positive until at least very late in pregnancy.

In the above table the results of the chemical tests, physical examinations and subsequent histories are presented. Physical examinations were made by J. P. Hutton, and the subsequent histories were obtained from Professor R. S. Hudson of the animal husbandry department.

It will be noted that chemical tests made under 80 days were negative. One test (=

*From the animal pathology section, Michigan Agricultural Experiment Station. Published with the approval of the director of the Station as journal article No. 358, n. s.

Swine Rooting and Hog Ringing

By JOHN B. BRYANT, D.V.M.

Mount Vernon, Iowa

SWINE ROOTING is a subject that presents several aspects. Nature equips swine for rooting. Adage proclaims, "Root hog or die." Science claims that the rations of rooting hogs are deficient. Most farmers deplore rooting as a pernicious habit and the means of crop destruction, and veterinary practitioners are confronted frequently with trouble caused by hog rings used in the control of this "rooting habit."

Discriminating swine producers find that rooting varies inversely with the skill employed in compounding the rations. Nevertheless, the most carefully compounded rations do not entirely curtail rooting, which suggests that hogs root for reasons other than recreation and "crop destruction." As an example, the dam's milk should be a complete ration for her offspring, yet it is well known that suckling pigs are prone to attacks of anemia when deprived of contact with the soil. It is true that artificial preventive measures are available for baby-pig anemia but the sensible course is to provide soil contact, which is the natural preventive of the retarded growth and death losses due to this malady. It is likewise reasonable to believe that all swine growth and health are fostered by rooting and feeding on the elemental minerals and food factors found in the soil and its contained roots, worms and insects. But, it is decreed that the modern hog, a naturally equipped creature of the soil, shall be served his rations delicatessen style, and that his snout shall be adorned

with jewelry which inflicts injury and pain too great to permit of his rooting in the soil on a health-seeking quest. The troubles arising from the use of hog rings and a discussion of a proper technic for the ringing of hogs are matters worthy of the attention of every veterinarian having a swine practice.

In one case that the writer observed, there were twelve sows nursing 80 pigs about 3 weeks old. The sows went off feed rather suddenly. The temperatures ranged up to 106.5° F. The wheezy, difficult breathing observed directed attention to the hogs' snouts. Infection caused by recent ringing was the trouble—not hog cholera, as the owner had feared.

A sow wearing a so-called humane ring, which is of the bar type and is placed in the nasal septum, was observed with a sanguineous mass about the size of a large orange entangled in the ring. This proved to be a coagulum of blood. It partly occluded the nostrils, causing greatly labored breathing, a frothy appearance of the mass and the spraying of blood about the pen. The sow was extremely nervous and the presentment was a formidable spectacle. Simple removal of the ring and an application of tincture of iodine constituted the treatment. A search of the pen revealed a nail on which the sow had caught her ring and torn the nasal septum.

A very distressing case of ring trouble was observed in a sow with a granuloma on her snout the size of a grapefruit. The victim's resistance was so low that she was destroyed forthwith.

Many pigs are rung at the weanling age and some develop infection. The symptoms are swollen nose, wheezy breathing, sharp rise in temperature and sparse eating due to "nose shyness." Because of the possibility of such developments it is the wise policy to avoid ringing at the time of vaccination or during the period of serum-virus reaction. Pigs presented for vaccination

(Continued from preceding page)

case 4) showed a questionable positive reaction at 84 days. Definitely positive reactions were obtained at 105 to 192 days. In the opinion of the authors, the test is reliable after 90 days. It is inexpensive and simple.

Reference

Cuboni, E.: A simple and rapid chemical hormonal pregnancy reaction. *Klin. Wochenschr.*, xiii (1934), p. 302.

that have been recently rung should be observed carefully and the rings removed from any that show infection.

Since the ringing habit is well entrenched, it should be guarded with certain precautions. The rings should be free of filth and rust when inserted. Rings that are stored in a hog house are exposed to moisture and dust; they gather rust and infective material and thereby become unfit for use. Sometimes rings rust on store shelves and these, of course, should not be used. They should be of a size that will fit snugly when completely closed. A loose ring gathers mud, manure and other materials which form a ball within the ring and inconvenience the pig. Too large a ring set deeply to make it fit is apt to invade the bony structure (= the prenasal bone) underlying the cartilaginous plate of the snout. Such mishaps give rise to serious bone infections and necrosis. Only the cartilaginous plate should be pierced by the ring. The skin covering the snout is peculiarly sensitive and, therefore, the animal must be held firmly and the ring placed deliberately, with proper regard for the structures involved. This writer regards the bar ring set in the nasal septum of mature hogs as a barbarous and unfit appliance. Multiple placings of the triangular or circular types are effective and less hazardous.

Turpentine Poisoning in Pigs

By J. W. GIFFEE,* D.V.M.

Cedar Rapids, Iowa

WHILE THE WRITER was visiting Dr. N. H. Larson of Ossian, Iowa, recently, a client called at the doctor's office and explained excitedly that after he and a neighbor had castrated his 19 pigs, they began to vomit, jump in the air, roll over and kick. He said that one had died within an hour after castration, and went on to point out that he had used turpentine on the castration wounds, applying it from a pop bottle.

Upon visiting the farm, we observed all of the symptoms the owner had described. The pigs acted like fish caught on hooks;

they would jump up and land with a thud, roll over, kick and squeal pitifully. The abdomens of all were greatly distended and the extremities were cold. Three more of the animals were dead when we arrived and four apparently were dying. Several others lay quietly, resting on the sternum. Two were obviously normal; at least, the appetite was good and they would nurse.

Postmortem examination of two of the animals disclosed hemorrhages of all lymph glands. The lungs and heart seemed to be normal. Incision of the abdominal cavity brought forth a copious flow of bloody serum with a strong turpentine odor. Some of the serum had organized and was floating in the bloody serum. There was a diffuse, acute inflammation of the large and small intestine. The kidney also was inflamed and a bloody, serous exudate oozed out on section. The tract of inflammation could be traced along the severed cords into the abdominal cavity.

The owner said that previously he had used kerosene on castration wounds but that he had used turpentine in this instance at his neighbor's recommendation.

Firing in 1892

I object to firing and blistering and believe that, like bleeding, it is doomed to a similar fate because firing and blistering a spavin (for example) besides being barbarous is treating a result and not a cause.—*Wm. Dryden, D.V.S., Journal of Comparative Medicine and Veterinary Archives, xiii (August, 1892), p. 570.*

Historic Excerpt On the Birth of Insulin

In the course of our experiments, we have administered over 75 doses of extract from degenerated pancreatic tissue to ten different diabetic animals. Since the extract has always produced a reduction of the percentage sugar in the blood and of the sugar extracted in the urine, we feel justified in stating that this extract contains the internal secretion of the pancreas.—*Frederick G. Banting, 1922.*

*Bureau of Animal Industry, U. S. Department of Agriculture.

Control of Hemorrhage by Intravenous Use of Oxalic Acid

By A. A. DAVIES, D.V.M.

Kansas City, Mo.

EXPERIMENTAL work carried out at Kansas State College by Miller and Davies¹ indicates the value of oxalic acid given intravenously in the control of hemorrhage. Further work on animals suffering from internal hemorrhage caused by being hit by cars, as well as hemorrhage resulting from the removal of tumors, shows convincingly the value of oxalic acid in veterinary practice.

Steinberg and Brown reported their work with this agent at the meeting of the Federation of American Scientists for Experimental Biology, held at Toronto, Ont., April 29, 1939. They used oxalic acid in 3-mg. doses in almost 1,000 human cases which were suffering from hemophilia, gastric ulcers, childbirth, and kidney and lung infections. In every case they reported that the hemorrhage had been stopped within five minutes.

INTERNAL HEMORRHAGE

Twelve dogs hit by cars were treated as follows: Six received oxalic acid in doses of one-half to 1 gr. (depending upon the weight of the animal) in 5 cc. of water, while in the other six cases commercial coagulants were used. The latter six cases were in relatively good condition before treatment. The mucous membranes had considerable color. All of the cases in the first group, however, were in very poor condition. The mucous membranes were white, the pulse rapid and very weak, and the respirations rapid, shallow and gasping. In all cases treated with oxalic acid there was complete recovery within two days. Within one hour some of the color returned and the gasping and difficult breathing were relieved. At the end of eight hours the pulse and breathing had returned to normal. In five of the six dogs treated with commercial products death occurred from internal hemorrhage within a short time. The sixth animal recovered.

HEMORRHAGE CAUSED BY REMOVAL OF TUMORS

Four dogs affected with mammary tumors were treated before surgical intervention with 1 gr. of oxalic acid in 5 cc. of water, administered intravenously. Local anesthesia was then given and the tumors were removed with practically no loss of blood. In such operations a large amount of blood is usually lost.

In a case that required the amputation of the right fore leg at the shoulder, the dog was first treated with one-half grain of oxalic acid intravenously in 5 cc. of water. Nembutal in only about one-half the amount normally used produced satisfactory anesthesia. Although an alarming cyanosis occurred, the patient made an uneventful recovery.

It seems that there is some chemical reaction between the oxalic acid and the general anesthetics (nembutal and ether) which produces the cyanosis. In the few cases treated under general anesthesia, the recovery in every instance was uneventful but the cyanosis was nevertheless alarming. It is suggested that oxalic acid be used sparingly with general anesthesia until the precise reaction that exists between these agents is determined.

A toxic dose of oxalic acid for a 25-pound dog has been shown to be 13 cc. of a 5 per cent solution; for a 1,000-pound mule, 200 cc. of a 5 per cent solution. The toxic symptoms are weakness, dullness, vomition, lachrimation, and icterus due to destruction of the red blood cells. Recovery from the states caused by a toxic dose occurs rapidly, however.

In all cases administer the drug slowly, since considerable irritation is produced by rapid administration. In large animals the gravity-feed method is favored, for no irritation results with this procedure.

CONCLUSIONS

1. Oxalic acid is a corrosive poison when administered orally. It is nevertheless ap-

parently nonpoisonous when given intravenously.

2. Alone or with local anesthesia oxalic acid successfully controls hemorrhage.

3. The drug must be injected slowly, preferably in a dilute solution, to prevent irritation.

4. A dose of one-half to 1 gr. of oxalic acid in 5 cc. of water produces rapid clotting of blood in 25- to 50-pound dogs within one to three minutes.

5. Oxalic acid combined with a general anesthetic produces cyanosis.

Reference

Miller, L. J., and Davies, A. A.: Oxalic acid as a coagulative agent. *Vet. Med.*, xxxiv (Sept., 1939), 9, pp. 544-545.

The Aphrodisiac Properties of Ergot of Rye

Ergot of rye is an abnormal growth, of blackish purple tint, that develops upon the ears of virtually all cereals, but mainly upon rye. It is the mycelium at rest (= the sclerotium) of the fungus *Claviceps purpurea*. While the subject of a great deal of research, its composition is not entirely known. It contains three alkaloids (= ergotine, ergotoxine and ergotamine), and a cholesterine (= ergosterine and ergotic acid).

Administered by way of the digestive tract, it has two well known actions: It provokes general vasoconstriction and energetic and persistent uterine contractions. The latter are especially active on the gravid uterus.

The authors used ergot of rye for 40 years to provoke rutting in cows and sows, particularly in animals that had not come in heat for three to six months. The dose in either case was 30 gm., given after fasting. The powder is made into a firm paste with honey and wrapped up in a leaf of cabbage, beet or lettuce, and put into the cow's mouth with the tongue drawn out. For sows, the powder is simply mixed in the feed.

No effect is seen for a few days and if after a week the animal does not come in heat, the dose is repeated. Sometimes the

result desired does not come until eight or more days following the second dose. For cows, the proportion of successful results runs from 60 to 100 per cent. Cases that do not yield to ergot sometimes respond to massage of the ovaries. For sows, the response is still more remarkable.

Freshness of the product is important and, although the price is somewhat high, it is not prohibitive in view of the benefit derived and the ease of administration.

The authors make no pretense to explain the mode of action, leaving that detail to the physiologist and chemist. However, it seems certain that inasmuch as the effect is not immediate, the dynamics are not comparable to the usual actions of ergot. Obviously, the drug restores the normal action of the genital organs, which is then expressed by the appearance of heat. The action seems to be comparable to that of vitamins. (*Marcel Pineteau [father] and Marcel Pineteau [son]. Aphrodisiac Properties of Ergot of Rye [title translated]. Revue de Médecine Vétérinaire, December, 1938, pp. 689-692.*)

Treatment of Keloids with X-Rays

The excellent results obtained from roentgen treatment for keloids in man suggests the use of this type of therapy in keloids of animals. The notoriously incurable post-traumatic keloids on the legs of horses would be an outstanding indication.

The technic recommended by del Guidice* of Buenos Aires for keloids in man consists of a dose of 200 to 250 roentgens at each irradiation, with a total of 850 to 1,000 roentgens for the series. Cures were obtained from one treatment. In other instances the series was repeated at intervals of two to three months. The earlier the treatment was begun, the better were the results obtained. According to the report (*loc. cit.*), accidental and surgical wounds of horses' legs that are apt to cicatrize into blemishing keloids would be the signal for the resort to this classical treatment.

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Erysipelothrix Infection in a Quail

By E. F. WALLER,* D.V.M.

Ames, Iowa

WITHIN the past few years there have been written a number of reports on *Erysipelothrix rhusiopathiae* infection in birds. In the United States, Beaudette and Hudson,¹ Madsen,² Van Roekel, Bullis and Clarke,³ and Rosenwald and Dickinson⁴ have reported natural outbreaks of Erysipelothrix infection in turkeys, and Morgan⁵ has observed it in pheasants. In the article by Beaudette and Hudson¹ there is a comprehensive review of the literature dealing with this infection in birds. Many of these reports originated in Europe. *E. rhusiopathiae*, according to these various reports, has been isolated from chickens, pigeons, ducks, coot, quail, thrush, parrots, and turkeys. The quail reported was one from a zoo in Vienna. For the most part the cases listed were found during routine laboratory examinations and were not associated with serious outbreaks.

The case under consideration here was a 10-week-old quail submitted from a nearby game farm to the department of veterinary pathology for diagnosis. This bird was found dead and the caretaker assumed that it had been injured in flying against the side of the cage. At necropsy a great number of small hemorrhages were found on the surface of the pectoral muscles as well as in the muscles themselves. The pericardial sac was distended with a clear fluid, the myocardium was more or less covered with petechiae and the liver was congested and swollen.

Smears were made from the heart blood and stained with Wright's stain. They revealed a number of slender, rod-shaped microorganisms of varying lengths. Some of the organisms had been phagocytized, others occurred singly throughout the smears, while still others were observed in small clumps of 12 to 15 each. A Gram's stain was made on other smears of heart

blood and these organisms were found to be Gram-positive.

Cultures were made from the heart, liver and pectoral muscle. About 2 gm. of the liver was crushed and suspended in sterile physiological salt solution. One-half cc. of this suspension was injected intravenously into each of two pigeons. Death followed the injection in approximately 20 hours. Tissue smears and cultures revealed the presence of organisms morphologically typical to and with the same staining characteristics as those from the quail.

The organisms from two serum-agar slants (72-hour growths) were suspended in sterile physiological saline. A rabbit, guinea pig and a pigeon each received 1 cc. of this suspension intraperitoneally. The pigeon died in 38 hours, the rabbit in five days and the guinea pig in eight days. The Erysipelothrix organism was isolated from all three cadavers. Van Es and McGrath⁶ state that the guinea pig is resistant to *E. rhusiopathiae* but that exceptions to this have been reported.

Two other pigeons were selected. One was given 2 cc. of swine-erysipelas-immune serum intraperitoneally and, 30 minutes later, both birds received 1 cc. each of the above-mentioned suspension of organisms. The pigeon that did not receive the serum died in approximately 36 hours while the other one remained apparently normal for two weeks, at the end of which it was destroyed.

The organism, isolated from the quail on culture, was agglutinated by serum from a rabbit immunized against a known culture of *E. rhusiopathiae*. It also was agglutinated by commercial swine-erysipelas-immune serum and by serum collected from a pig affected with chronic arthritis. This pig was obtained from a herd which was known to have been infected with swine erysipelas. It was not agglutinated by serums from an apparently normal cow,

*Department of veterinary pathology, Iowa State College.

rabbit and pig. The cultural reactions of this organism corresponded to the findings of Karlson⁷ for *E. rhusiopathiae*.

The source of infection in the quail could not be definitely determined. There is a possibility that the infection originated from a nearby herd of swine. The quail pen was located about 20 feet from the boundary fence. On the opposite side of the fence was a herd of swine. A number of pigs had died during the summer from a disease condition diagnosed by the local veterinarian as swine erysipelas.

The observations here recorded are not of particular economic importance at present but should be of interest to veterinarians, sportsmen and physicians. The finding in a game bird of an infectious disease that is capable of establishing itself in man as well as in domestic animals might have a far-reaching significance.

ACKNOWLEDGMENT

The writer is indebted to Miss Lucile Bishop of the veterinary division of the University of Minnesota for confirming the identification of this microorganism.

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Quinine Bisulfate in Ocular Affections

Quinine bisulfate was found to possess curative properties in the erstwhile incurable trachoma of man and this fact was seized as a sufficient reason to recommend this salt of quinine as a panacea for every

eye disease to which domestic animals are heirs. The fact of the case is that local use of quinine bisulfate does not show any favorable effect in trachoma of man until after diligent application of several months and, as a rule, cures are obtained only after treatment of six or more months. It is not a quick cure of any local lesion to which it is applied.

Those who replace the known facts of drug dynamics for empiricism will recall that the alkaloids of cinchona topically applied are anesthetic, antiseptic, slightly styptic and stimulant and that it is the combination of these actions over a long period of time that tends to set matters right in the conjunctiva of the trachoma victim. Moreover, quinine salts used upon the eye at a strength above 1 per cent (1 $\frac{1}{4}$ per cent is preferable) is irritating and may even cause sloughing. Gifford (*Jour. A.M.A.*, Sept. 2, 1939) in an editorial, entitled "The Use of Drugs in Ophthalmology," says that in corneal erosion of ulceration, this drug should be employed with great care.

Its one indication in veterinary medicine, in view of its known dynamics plus clinical observations, is ulceration of the cornea of dogs when used as an aid to vitamin A. For acute conjunctivitis and panophthalmia of any type and for the self-limiting rickettsia of ruminants we call contagious keratitis, one would not regard quinine as a strategical weapon in eye diseases.

Sulfanilamide in Post Castration Peritonitis

By W. B. REDMAN, D.V.M.

Dow City, Iowa

THE SUBJECT was a 4-year-old saddle horse from which two well developed intra-abdominal testicles were removed. The scrotum was packed with gauze and the packing retained with sutures. When the pack was removed 24 hours later, a loop of intestine appeared at the level of the incision. The loop was immediately replaced and retained with another pack and suturing, preparatory to casting the animal for the purpose

of cleansing the inguinal canal, and replacing the protruded intestine and closing the external inguinal ring. The intestine, which was covered with a fibrinous exudate, and the canal were rinsed with an antiseptic solution. The subcutaneous structure comprising the external abdominal ring was closed with sutures.

In six days, the tucked flank, failing appetite and elevation of temperature to 103° F. made up a pretty picture of peritonitis. The sutures were removed to improve the drainage, the cavity irrigated with an antiseptic solution, and 200 gr. of sulfanilamide was given. The subsequent treatment consisted of daily irrigations of the wound cavity and the daily administration of 150 gr. of sulfanilamide. The patient showed marked improvement in 48 hours and proceeded to recover completely without further interruption.

The purpose of this report is to suggest that the sulfanilamide treatment should have been started at the time the protrusion of the intestine was discovered, which was 36 hours after operating.

Tetanus Toxoid

All French soldiers called for training since 1936 have been immunized against tetanus with tetanus toxoid, the anatoxin discovered and developed by Ramon of the Pasteur Institute of Paris. Ramon is a veterinarian. His early work on tetanus immunization was done on thousands of military horses and mules.

The Diagnosis of Weil's Disease

Since Weil's disease (= spirochetosis icterohemorrhagica) is a known infection of dogs encountered with considerable frequency in clinical work, and the presence of the specific spirochete is not easily detected post mortem, further development of the agglutination test will aid in the diagnostic work of the small animal clinic. Methods of standardizing cultures of *Leptospira* to be employed in the serological test are needed. Brown and Broom (*British Medical Journal*, June 10, 1939)

believe that cultures that have been formalized for 48 hours agglutinate at a higher dilution than freshly formalized cultures. Such cultures give a macroscopic agglutination after incubation for one hour but the macroscopic technic is not as definitive as the microscopic inspection of the reaction.

The incidence of this spirochetosis of dogs in this country has not yet been determined, but that it does occur at least here and there is not questioned.

Vitamin M*

Recent experiments carried out on monkeys at the University of Arkansas appear to show that there is some factor in brewers' yeast and liver extract required to prevent pellagra.

Nicotinic acid had no demonstrable effect on the pellagra-like lesions produced by their routine deficiency diet unless it was supplemented with brewers' yeast or liver extract. When thus supplemented, normal growth and a normal blood picture were maintained over long periods. The conclusion is that a factor, which they have named vitamin M, contained in brewers' yeast or liver extract is required in the treatment of pellagra (of monkeys) in addition to usual fractions of the vitamin B complex.

Wheat Ration Favors Hatchability

In a study of the effect of grains on hatchability and growth, Call and Wilke of the Iowa station found that hatchability was best in eggs from hens fed on a wheat ration. The cereals tested were wheat, corn and oats. Eggs from wheat-fed hens produced more vigorous chicks than the eggs of corn-fed birds. The authors question that the grain fed to breeding stock has much effect on the growth of the chicks.

King Solomon was very fond of animals. The Bible says that he kept 300 porcupines. — *New South Wales Police News*.

*From an editorial in the Journal of the American Medical Association, April 1, 1939.

CURRENT LITERATURE

ABSTRACTS

Insulin in General Pruritus

The remarkable relief of nondiabetic pruritus obtained by the use of insulin and dextrose in human medicine, as described by Verloet, is worthy of study in small animal medicine. Patients affected with hepatic disorder associated with cutaneous pruritus yielded to insulin injections. Twice 10 units or twice 15 units with dextrose was sufficient to make the itching subside. The theory advanced in explanation of the favorable result is that insulin corrects the intracellular metabolism of the liver and kidneys. The author believes that this treatment deserves attention in various types of cutaneous pruritus. (*C. G. Verloet. Treatment of Cutaneous Pruritus with Insulin Together with Some Theoretical Deductions. Nederlandsch Tijdschrift voor Geneeskunde, lxxiii, June 10, 1939, p. 2728.*)

A New Way to Ripen Beef

Tough beef can be made tender quickly through a new process involving air conditioning and ultraviolet rays. A project of the Mellon Institute, the method makes possible the raising of all types of beef by one grade in palatability rating. Toughness in steaks is caused essentially by connective tissues that bind together in small bundles the innumerable muscle fibers, and it has been known for centuries that these connective tissues are softened by hanging. At customary storage temperatures (about 35° F.) this requires four to eight weeks.

The trick of the new process is to use high temperature and humidity to speed up the chemical reactions that turn tough tissue into material that can be readily masticated. However, these conditions are ideal for the growth of both bacteria and

moulds; hence, ultraviolet radiation is employed in this new process to kill the micro-organisms.

It is now possible to ripen beef in a temperature of 60° F., and a relative humidity of 85 to 90 per cent, within one to three days—about 19 times faster than by the old method. (*Tough Beef Made Tender Quickly with Aid of Light Rays. Popular Mechanics, lxxi, June, 1939, p. 844.*)

Excretion of Sulfanilamide

Sulfanilamide is excreted by the bile, pancreatic juice, gastric juice, succus entericus, and saliva of dogs in determinable amounts. Among these secretions, the highest concentration was found in gastric juice, where it may attain a level as high as 50 mg. per 100 cc. four to six hours after oral administration of 2 gm. The drug was not particularly toxic to the liver in dogs of 7 to 12 kg. (15 to 26 lbs.) receiving 0.66 to 1.3 gm. for three days. Excretion by the pancreas occurs at blood levels as low as 2.1 mg. per 100 cc., and the drug appears in the bile when the blood level is 1.3 gm. per 100 cc. (*H. M. Carryer and A. C. Ivy. Studies of the Excretion of Sulfanilamide by the Digestive Glands. Journal of Pharmacology and Therapeutics, lxxi, July, 1939, pp. 251-378.*)

Therapy of Spavin

Point firing, when employed with skill and caution, is the most effective treatment of spavin. Deep firing, however, should not be employed as a routine measure, but merely as a last resource. The value of blisters is overrated greatly; moreover, blistering is a desperate measure. It possesses the disadvantage that a proper therapeutic effect is difficult to obtain. It is

therefore far better to use an alternative preparation. In this respect, iodine is a promising drug. It is easily applicable and does not require precautionary measures. The reaction of the organism is an indication for the dosage. The latter therapy is advantageous in that the horse may be used for work during the treatment. (*Zur Spatbehandlung (Therapy of Spavin)*, by Michalk. *Zeit. f. Veterinark.*, li, 1939, p. 114.)

Sulfapyridine in Pneumonia

Out of 342 patients treated with sulfapyridine at a Norway hospital, the mortality was 5.8 per cent. The group were cases of croupus or atypical pneumonia. The previous mortality from 1928 to 1938 ranged between 20.5 and 35.2 per cent. All cases of secondary pneumonia were discarded for this observation, that is, cases following a surgical operation or other ailments and doubtful cases, especially where improvement had begun before the drug was given. (*Oslo correspondent to the American Medical Association*, Sept. 2, 1939.)

[Veterinarians should not be deceived by these results, since pneumonia of animals has a different pathogenic flora from that of man.—Ed.]

Sulfanilamide in Tetanus

In a discussion on sulfanilamide at the Royal Society of Tropical Medicine and Hygiene, numerous indications were added to the already long list. One speaker declared that the problem was no longer when to administer this drug but when not to do so. Among the uses named were: The early stage of typhoid fever, various types of protozoan infections, bubonic plague, elephantoid fever, *Brucella abortus* and *melitensis* infections, smallpox pustulation, venereal lymphogranuloma and, the least expected, tetanus. In the latter disease, Dyce Sharp reported miraculous results. His last five tetanus patients recovered under drugs of the sulfanilamide group. In patients who could swallow, it was given by

the mouth; in others, intravenously every four hours. (*London correspondent to the American Medical Association*, Sept. 2, 1939.)

Wheat Germ Oil in Nutritional Diseases of Turkeys

In myasthenia of the gizzard of turkeys, wheat germ oil is a preventive. It reduces the occurrence of a disease which is somewhat troublesome to turkey poults in New England. The feeding of a simplified ration gave an average of 73.8 per cent of a disease characterized by grayish lesions affecting the fleshy part of the gizzard. Lettuce and alfalfa meal failed to protect poults against this nutritional deficiency. Soy bean meal reduced the incidence to 41.6 per cent, and wheat germ oil to 19.4 per cent, compared with the 73.8 per cent of the unprotected poults. (*E. Jungherr, K. C. Seeger and A. M. Pappenheimer. Bulletin 229, Storrs Agricultural Experiment Station.*)

The Curative Value of Iontophoresis in Horses

Iontophoresis does produce curative effects in acute diseases of the external organs of the eye. However, when these results are contrasted with those obtained from treatment with boric acid packs, yellow oxide of mercury, calomel, and other collyria, then one must admit that iontophoresis is a more cumbersome method and does not represent an improvement over the treatments now in vogue. (*Heilveruche bei Pferden mit Hilfe der Iontophorese (The Curative Value of iontophoresis in horses)*, by G. Wunsch. *Zeit. f. Veterinark.*, li, 1939, p. 100.)

Incubator Capacity

The estimated capacity of the chick hatcheries of the United States in 1939 is 400,000,000 eggs, an increase from 276,000,000 for 1934.

Government statistics indicate that the number of baby chicks hatched in the

United States by commercial hatcheries amounted to 700,000,000.

There are two types of hatcherymen: Commercial and breeder. The latter differs from the former only in producing chicks and pullets of more than average quality.—*Excerpt from Hatchery Tribune.*

BOOK NOTICE

Meat Hygiene

The veterinary profession is profoundly interested in meat inspection, since food hygiene has become one of the major branches of veterinary science. Meat is not only an indispensable aliment of the American population but it is also the one requiring the most skillful supervision in the removal of unwholesome pabulum from the channels of trade.

This being true, books by authors of wide experience and learning in the science and art of meat inspection have become welcome additions to the veterinarian's shelf of classical works. "Seventh Revised Edition" is, in itself, quite a sufficient recommendation for any book on a specialized branch of veterinary medicine. The phrase is synonymous with "Best Seller," the caption that puts the most critical reviewer on the defensive.

Meat Hygiene is American. The senior author (Edelmann) seems to have yielded practically all of the pages to his American coauthors (Mohler and Eichhorn), who have practically transformed the book into a manual of ante- and postmortem meat inspection for general use in this country. It contains throughout the federal regulations governing the art and is, therefore, a standard (official) text on the subject.

Meat inspection, says the introduction, is not only a human health measure. It prevents frauds and deceptions in the merchandizing of meat-food products and is also an excellent means of detecting the source of animal plagues. Protecting human health, preventing fraud and detecting the foci of contagious diseases are sovereign

steps in the practice of veterinary medicine, and, needless to acclaim, combing through millions of carcasses in the search for disease is a prolific source of knowledge of corporeal morbidities that would otherwise escape notice. The authors do not fail to impress the reader with these features of their art.

The 15 chapters cover 1) The origin of meat foods, 2) the morphology and chemistry of the principal tissues of food animals, 3) the production, preparation and conservation of meat, 4) regulations governing meat inspection in the United States, 5) organization and methods of procedure of the meat inspection force, 6) decisions of inspectors and disposal of condemned meat, 7) abnormal conditions and diseases of food-producing animals, 8) infectious diseases of food-producing animals, 9) post-mortem changes in meat, 10) examining and judging prepared and preserved meats, chickens, game, fish, amphibia and crustaceans, 11) food poisoning, 12) history of meat hygiene, 13) abattoirs and stockyards, 14) preparation and control of meat-food products and 15) chemical analysis of meat-food products.

The titles of these chapters speak for themselves, the integer indicates how thoroughly the ground is covered, and the authorship does the recommending. The chapter on "History of Meat Hygiene" is ten pages of classical reading that will serve well as the basis of a better understanding of veterinary medicine as a utilitarian art.

The diction and style are faultless, illustrations excellent, and the contents up to date. *Meat Hygiene* will please any reader interested in any branch of medicine or hygiene. (*Meat Hygiene. Seventh Revised Edition. By Richard Edelmann, Ph.D., John R. Mohler, A.M., V.M.D., D.Sc., and Adolph Eichhorn, D.V.S. 463 pages, with 157 illustrations, and 5 color plates. Lea & Febiger, Philadelphia, 1939. Price, \$5.00.*)

If you are a little queer you are probably normal.—*Stephen Habbe in Hygeia.*

THE NEWS

Many Prominent Veterinarians Attend

Third International Congress for Microbiology

The Third International Congress for Microbiology was held at the Waldorf-Astoria, New York City, September 2-9, 1939. Its international aspects were rather modest because of the uncertain situation in Europe. Even a number of those foreign delegates who braved such conditions and arrived on time in New York City left immediately after war was declared by Great Britain and France. One could not avoid recalling a similar situation which occurred at the opening of the 1914 International Veterinary Congress in London. Although a large audience attended the first session in the morn-



Somebody's camera singled out this group of notables among the roundup of medical celebrities at the veterinary exhibit, New York World's Fair, on Microbiology Day. Having a jolly good time in a scientific way are (left to right) H. W. Schoening of the U. S. bureau of animal industry, Washington, D. C.; Jacob Traum of the division of veterinary science, University of California, Berkeley, Calif.; John R. Mohler, chief of the U. S. bureau of animal industry, Washington, D. C.; A. Eichhorn, director of the Animal Disease Station at Beltsville, Md.; and (bending over behind Dr. Mohler) Karl F. Meyer of the University of California, San Francisco, Calif.

ing, the call to arms by their respective countries was received by so many delegates simultaneously that a mere corporal's guard was present in the afternoon, at which time the 1914 London Congress was brought to an untimely conclusion, *sine die*.

It may be of interest to our readers to learn that among the vice-presidents of the microbiological congress, the A.V.M.A. was repre-

sented by two of its members, Prof. Dr. Robt. von Ostertag of Germany and J. R. Mohler of Washington, D. C. Other veterinarians or those closely identified with our profession who were either on the program or attended one or more of the nine sessions were the following: James E. Ackert, Manhattan, Kan.; C. Horner Andrews, London, England; F. R. Beaudette, New Brunswick, N. J.; Karl Beller, Giessen, Germany; William Berg, New York, N. Y.; W. I. B. Beveridge, Sydney, Australia; Fred Boerner, Philadelphia, Pa.; Frank Breed, Omaha, Neb.; L. D. Bushnell, Manhattan, Kan.; Thos. W. M. Cameron, MacDonald College, Canada; J. S. Clark, St. Joseph, Mo.; A. B. Crawford, Beltsville, Md.; Adolph Eichhorn, Beltsville, Md.; Ervin A. Eichhorn, Washington, D. C.; C. P. Fitch, St. Paul, Minn.; W. S. Gordon, Edinburgh, Scotland; W. A. Hagan, Ithaca, N. Y.; I. Forest Huddleson, East Lansing, Mich.; Erwin Jungherr, Storrs, Conn.; Lt. Col. R. A. Kelser, Washington, D. C.; B. M. Lyon, Pearl River, N. Y.; K. Köbe, Griefswald, Germany; C. N. McBryde, Ames, Iowa; H. M. Martin, Philadelphia, Pa.; Karl F. Meyer, San Francisco, Calif.; Wm. M. Mohler, Washington, D. C.; Norman J. Pyle, Pearl River, N. Y.; G. Ramon, Garches, France; John Reichel, Philadelphia, Pa.; L. F. Rettger, New Haven, Conn.; Burton R. Rogers, Chicago, Ill.; J. E. Schneider, Philadelphia, Pa.; Harry W. Schoening, Washington, D. C.; Frank W. Schofield, Guelph, Ont.; Benjamin Schwartz, Washington, D. C.; M. W. Scothorn, New York, N. Y.; Joseph P. Scott, Philadelphia, Pa.; E. L. Stubbs, Philadelphia, Pa.; E. L. Taylor, Weybridge, England; Frank Thorp, Jr., Fort Collins, Colo.; Jacob Traum, Berkeley, Calif.; O. Waldmann, Griefswald, Germany; J. H. Whitlock, Manhattan, Kan.; I. D. Wilson, Blacksburg, Va.; Hans Chr. Bendixen, Copenhagen, Denmark; B. R. Criley, Pearl River, N. Y.; R. A. Hendershott, Trenton, N. J.; and J. van der Hoeden, Utrecht, Netherlands.

One of the outstanding events of the Congress was a personally conducted tour of the Rockefeller Institute for Medical Research through the courtesy of Edric Brooks Smith, secretary of the board of trustees, who took a group of visiting veterinarians to the various laboratories in which they had expressed a special interest.

Dr. Olitsky, well known as a member of the

Bureau of Animal Industry Foot-and-Mouth Disease Commission, which studied this disease in Europe during 1925 and 1926, demonstrated avian encephalomyelitis, while his assistants showed polyarthritis and choreiform syndromes in mice produced by pleuropneumonia organisms closely related to those of bovine pleuropneumonia. Protection tests in equine encephalomyelitis were also explained. Max Theiler, son of our lamented colleague, Sir Arnold Theiler, demonstrated his epochal work on yellow fever immunization and expressed deep appreciation for our visit, which he linked with our respect for his father. Vaccinia, virus-induced cancers, electrophoresis and ultracentrifuge concentration were also presented.

Receptions with refreshments and music were held at the Waldorf-Astoria on the evening of September 2 and at the Rockefeller Institute on September 4, followed by the general banquet at the Waldorf on September 7. On the afternoon of September 5 (Microbiology Day) a reception with refreshments was given to the delegates and members in Medical Hall and Public Health Building at the World's Fair, and the A.V.M.A. was one of the hosts. Favorable comments were heard on all sides regarding the educational value of the exhibit. Already there have been over 22,000,000 visitors to this fair, many of whom have viewed the veterinary exhibit. This should prove of great assistance in extending the public relations and publicity objectives of the A.V.M.A.

J. R. M.

A.V.M.A. Day at the Poultry Congress

Under the chairmanship of Cliff D. Carpenter of Fort Wayne, Ind., A.V.M.A. Day at the World's Poultry Congress in Cleveland, August 2, 1939, goes down in the vital register of the Association as an event where glamour and science were successfully blended into a harmonious episode. Three hundred veterinarians and their wives sat down to a fine luncheon amid delightful strains of music. The after-luncheon program comprised many practical papers on avian medicine.

The session opened with an address of welcome by Professor J. E. Rice, general chairman of the Congress, who is credited with having planned and carried out the greatest event of this kind in history. The address of response by L. A. Merillat, in behalf of the Association, told what veterinarians have done and expect to do for poultry science and poultry medicine, with due apologies for faults that are rapidly being overcome. John R. Mohler, chief of the Bureau of Animal Industry, United States Department of Agriculture, introduced the following foreign guests formally invited to participate in the program: W. Horner Andrews of Weybridge, England; C. A. Arias of

Havana, Cuba; K. F. Besser of Giesen, Germany; H. C. L. E. Berger of The Hague, Netherlands; A. Casceres of Havana, Cuba; J. C. te Hennepe of Rotterdam, Netherlands; J. L. G. Santos of Rio Janiero, Brazil; C. R. Turbet of Fiji Islands; and C. H. Weaver of Ottawa, Ont.

W. R. Hinshaw of California spoke of the veterinarian's contributions to former poultry congresses in a way that left no doubt as to the part the veterinary profession has played in the development of poultry production.

O. V. Brumley, dean of the College of Veterinary Medicine, The Ohio State University, Columbus, Ohio, spoke on the part that our educational system is playing in providing trained practitioners for the field of avian medicine.

The value of avian pathology research to the practitioner by C. A. Brandly of the poultry research laboratory at East Lansing, Mich., emphasized the need of a correct understanding of poultry diseases in clinical pursuits.

Walter E. Brandner of Petaluma, Calif., and Frank C. Tucker, of Claypool, Ind., both of whom are widely known as expert poultry clinicians, left little to be desired in advice to the general practitioner on how to proceed to be useful to poultry farmers.

Breeding, feeding and flock management in their relationship to disease, by Charles B. Cain of Memphis, Tenn., will be remembered for its sound logic.

The meeting closed with a symposium, or free-for-all discussion, on the perturbations of avian practice due to the deep-rooted belief in nostrums.

The officers and members of the A.V.M.A. are grateful for the warm reception given the veterinary profession by the sponsors of the Seventh World's Poultry Congress, and hope that this event at Cleveland will become a new point of departure in the progress in avian pathology and clinical medicine.

Medical Journal Lauds Veterinary Service

Journal Lancet for September 1939 carries a splendid article on equine encephalomyelitis by Charles E. Cotton, state veterinarian of Minnesota. In the editorial section of the same issue, this widely read medical magazine praises the veterinary profession for its part in protecting man against animal plagues communicable to the human family. The editor advises that medical societies will profit through veterinary contributions to their programs.

Bacteria control in several Ohio meat markets is now being supplied by ultraviolet ray equipment. Some markets have posted a warning to workers to don hats and sun glasses when entering the cold rooms.

U. S. GOVERNMENT

Kissing Bug Transmits Sleeping Sickness to Humans, U. S. Health Officials Warn

The U. S. Public Health Service recently cautioned people to beware of the kissing bug (= *Melanotestetes picipes*), a newfound carrier of human sleeping sickness. Ardzoony Packchianian, a zoologist of the federal health service, made this discovery while conducting a routine survey in Texas.

The bug is a blood-sucking, venomous hemipterous insect, about 1 inch long, that sometimes bites the lips of its victims. It is similar to the tsetse fly of Africa, which also transmits sleeping sickness (= trypanosomiasis). The germ which both insects carry is the trypanosoma, which causes severe heart injury and for which no cure is known. It has been found in California and Arizona as well as in Texas.

South Becoming Safe for Livestock Interests, Chief of B.A.I. Says

Corollary to the more effective control of animal diseases and parasites, conditions for profitable livestock raising in the southern states are changing for the better. This was the view expressed by John R. Mohler, chief of the federal bureau of animal industry, at the Memphis meeting of the Association.

Dr. Mohler cited the eradication of cattle ticks throughout most of the South as an influence definitely advantageous to the dairy and beef-cattle industries. "There are better opportunities than formerly for southerners to make a good living from cattle," he said.

Federal Research on Trichina Infection of Hogs Joggles Trichinosis Scare

Addressing the recent Third International Congress for Microbiology in New York City, Benjamin Schwartz, chief of the zoological division of the U. S. bureau of animal industry, stated that only about 1.5 per cent of all hogs are infected with trichinae. "In the light of this low infection," Dr. Schwartz said, "it is to be expected that cases of clinical trichinosis in humans are infrequent. Sweeping assertions that large numbers of persons have trichinosis are not supported by scientific evidence."

By way of a 4½-year study of the diaphragms of more than 25,000 hogs from the most important swine-breeding areas of the country, the bureau determined that the incidence of the infection in hogs (= 1.5 per cent) had declined 80 per cent in the past 35 years. In the period 1898-1906, the government examined

more than 8,000,000 pork samples from that many hogs. At that time the infection was reported to be only about 1.5 per cent, but it has since been shown that the potential infection in that period was approximately 7.5 per cent.

Diaphragms were studied because they are one of the preferred locations of the trichinae. About 13,000 of all hogs studied were grain fed; about 10,500 had been given ordinary garbage as the main food. The rest of the animals studied had been fed cooked garbage and, since they had virtually no trichina infection, were not included in the findings.

Regular Army

By direction of the president, and under the provisions of Public No. 18, 76th Congress, the following first lieutenants of the Veterinary Corps Reserve are ordered to extended active duty and assigned to the station indicated after their names, for duty, until June 30, 1940: Robert Henry Yager, Somerset, Va., to Mitchell Field, L. I., N. Y.; Alpheus Heise Seeley, Fort McPherson, Ga., to Randolph Field, Tex.; Russell Martin Madison, Slayton, Minn., to Chanute Field, Ill.

The resignation by Captain Robert James Brown of his commission as an officer of the army is accepted by the president, effective August 24, 1939.

Lt. Col. Peter T. Carpenter is assigned to additional duty as assistant to the officer in charge, southwestern remount area, Colorado Springs, Colo., in connection with inspection and purchase of public animals and operation of the army horse-breeding plan.

Captain James B. Nichols, Fort Mason, Calif., is assigned as transport veterinarian on the USAT Meigs for the trip scheduled to sail from San Francisco about October 5, 1939, to the Philippine department and return.

Captain Lloyd C. Tekse is relieved from further assignment and duty at the Presidio of San Francisco, Calif., effective on or about October 25, 1939, and assigned to the Presidio of Monterey, Calif., for duty.

Captain Charles S. Greer, now at Army and Navy General Hospital, Hot Springs National Park, Ark., is relieved from assignment to duty at Fort Riley, Kan., is assigned to duty at Fort Leavenworth, Kan., and upon release from Army and Navy General Hospital, will proceed to Fort Leavenworth and report for duty.

Lt. Colonel George J. Rife is relieved from duty at Fort Leavenworth, Kan., effective on or about September 30, 1939, is then assigned to duty with the north central remount area, Kan-

sas City, Mo., and will proceed to Kansas City and report for duty accordingly.

Veterinary Corps Reserve

New Acceptances, First Lieutenants.—Leonard Mirsky, 1153 Ruby St., Philadelphia, Pa., and Abe Lincoln Stewart, 316 S. Main St., Fitzgerald, Ga.

Promotions, to Captain.—Nels Frank Christensen, 4294 Natural Bridge, St. Louis, Mo.; Oscar Frederick Fischer, Jr., 1272 Pearl St., Denver, Colo.; and Samuel Kelsall III, 4247 Mason St., Omaha, Neb.

Separation.—Major George Bernard Hartke of Philadelphia, Pa., died on February 15, 1939, of a cerebral hemorrhage.

B.A.I. Transfers

Robert L. Alkire from Waterloo, Iowa, to Baltimore, Md., on Bang's disease; Samuel O. Benson from New York City to Montgomery, Ala., on tuberculosis eradication; Gilbert N. Campbell from Little Rock, Ark., to Bismarck, N. D., on Bang's disease; Smith V. Ewers from El Paso, Texas, to Fort Dodge, Iowa, acting in charge of meat inspection; Vernon V. Golden from Chicago, Ill., to Omaha, Neb., on meat inspection; C. Wilbur Gollehon from Ottumwa, Iowa, to Omaha, Neb., on meat inspection; Alexander Greenfield from New York City to Ottumwa, Iowa, on meat inspection; Cloyde L. Guinn from St. Louis, Mo., to Leavenworth, Kan., in charge of meat inspection; Chas. F. Helmboldt from Charlestown, W. Va., to Boston, Mass., on Bang's disease; Elmer D. Johnston from New York City to Kansas City, Kan., on virus-serum control; Max E. Landsberg from Oklahoma City, Okla., to South St. Joseph, Mo., on meat inspection; Wilbur McPherson from Oklahoma City, Okla., to Little Rock, Ark., on tuberculosis eradication; Jas. H. Milligan, Jr., from South St. Joseph, Mo., to Montgomery, Ala., on meat inspection; Joseph L. Mosley from South St. Paul, Minn., to Oklahoma City, Okla., on Bang's disease; Norman M. Nelson from Des Moines, Iowa, to East Lansing, Mich.; on animal husbandry; Ray S. Pyles from Albuquerque, N. Mex., to Topeka, Kan., on Bang's disease; Garrett W. Riley from Leavenworth, Kan., to Albany, Ga., in charge of meat inspection; Henry G. Voetberg from Oklahoma City, Okla., to South St. Paul, Minn., on meat inspection; Clifford Westerfield from Atlanta, Ga., to Oklahoma City, Okla., on Bang's disease.

Lee M. Becton from Richmond, Va., to Baltimore, Md., on tuberculosis eradication; John W. Casey from New Orleans, La., to San Antonio, Texas; George E. Cottrall from Nashville, Tenn., to East Lansing, Mich.; Benjamin W. Dean from Richmond, Va., to Baltimore, Md., on tuberculosis eradication; Wm. Ginn

from Columbia, S. C., to Raleigh, N. C., on Bang's disease; Conley G. Isenberg, from New York City to Austin, Minn., on meat inspection; Sidney L. Kaplan from Richmond, Va., on Bang's disease to same city on meat inspection; Harry E. Kingman, Jr., from Chicago, Ill., on meat inspection to same city on pathology.

AMONG THE STATES

Alabama

The following students were graduated from the School of Veterinary Medicine, Alabama Polytechnic Institute, Auburn, on August 18: Bruner S. Bowie of Nimmons, S. C.; Sam H. Dorfman of Rockaway Beach, N. Y.; Julian H. Edwards of Pinckard, Ala.; and Bob H. Mayo of Polkville, Miss.

California

The presence of bubonic plague was discovered in San Francisco in 1900 and, within ten years, rodents in nine California counties were found to be infected. These included chipmunks, prairie dogs, native rats, ground squirrels and marmots. In spite of this apparent threat, the public health service has been able to prevent the disease from spreading over the American population.

Canada

Mildred Joycelyn Moynihan of Toronto, Ont., wife of Wm. Moynihan, resident provincial secretary of the Association, died on September 8 after a brief illness.

District of Columbia

Milton A. Bosley (U. S. C. V. S. '17) operates a canine table in his Washington, D. C., hospital which can be raised from the floor level to any convenient height. The mechanism is operated with an electric motor. The advantage claimed is that dogs can be led upon the table instead of being lifted to it.

Illinois

A new record for heavy weight pulling teams was established at the state university on September 2, when Duke and King, owned by the Cedardell Farm, made a tractive pull of 4,000 pounds for the full distance of 27½ feet, which is the equivalent of starting for 15 or 20 times a load of 51,948 pounds on a wagon over granite block pavement. Duke is 10 years old and weighed 2,350 pounds. King is 12 years old and weighed 2,000 pounds. This pair has held the record since 1937.

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Robert Graham, director of the department of animal pathology and hygiene, University of

Illinois, warns the readers of *Successful Farming* (Oct. 1939) not to confuse encephalomyelitis (= sleeping sickness) of cattle with the equine infection or with infectious keratitis of the bovine species.

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Indiana

The Northwestern Indiana Veterinary Association held a meeting on September 28 at Rensselaer. Dinner was served at 7:00. The speaker for the evening was W. S. Gochenour of Indianapolis, Ind., who discussed the use of biological products in veterinary practice.

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An article by A. W. Ratcliffe, M.D., published in the Indiana State Medical Association's journal (July, 1939), gives the number of human cases of rabies in that state as 40 since 1926. During the same period 11,478 dogs were examined for Negri bodies and 7,659 bitten persons were given the Pasteur or Semple treatment at public expense. Of the 11,478 brains examined, 6,172 were positive. Among the 40 persons who died of rabies, only twelve had received antirabic treatment and, in 34 of them, the wound had been cauterized. The incubation period for those bitten above the clavicle was 22.5 days, and 39.7 days for those bitten elsewhere.

A better understanding of the danger of bites from sick and stray dogs and early prophylactic treatment are in order, says Dr. Ratcliffe.

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"Swine Day" for juniors was held at Purdue University on September 23. This was the 19th annual event of this kind held by the University. The program consisted of the study of 400 hogs and experiments and speeches.

Iowa

The Cedar Valley Veterinary Medical Association held a dinner meeting at Black's tea room in Waterloo, September 11, with 55 in attendance. J. A. Barger of Des Moines, inspector in charge, U. S. bureau of animal industry, spoke on equine encephalomyelitis in Iowa. H. E. Biester of Iowa State College, Ames, discussed laboratory work done during the present season on heads of suspected cases of equine encephalomyelitis. E. F. Waller of the state college talked on diseases of poultry.

Missouri

Veterinarians interested in the artificial insemination of dairy cows should write to the Agricultural Experiment Station, University of Missouri, Columbia, Mo., for their latest bulletin, No. 407. It is well written and profusely illustrated.

To get money for his registration at the University of Missouri, Harmon Smith has decided to sell his mule, Rosie, which he rode into Columbia after an eleven-day trip of 330 miles from Cardwell, near the Arkansas border. He placed Rosie with a mule dealer. "Rosie had to go," the boy lamented. "I want to be a veterinary surgeon. And it costs money to go to school."

Montana

W. J. Butler, state veterinary surgeon of Montana, calls attention to an apparently incorrect statement that appears in a government report, entitled "How Dangerous Are Wood Ticks?" The report was published in the September 1939 issue of the JOURNAL, page 385.

In the article it is stated that an infected wood tick must remain on the body for six to eight hours in order to transmit spotted fever.

Dr. Butler advises that, while he does not know to what particular tick the article refers, the *Dermacentor andersoni*, which is the principal tick in the western area, can and does attach itself in a much shorter time. "I think I am correct in stating," he says, "that it has been commonly observed to attach itself in 20 minutes, although the period is commonly much longer, as the tick usually moves over the body before it finds a location and starts to attach itself."

New Jersey

On the occasion of the recent visit made by H. Chr. Bendixen of Denmark and J. van der Holden of the Netherlands to various points in America, including the nearby Rockefeller Institute for Medical Research at Princeton, a number of Trenton veterinarians were afforded the opportunity to discuss informally with these noted veterinarians conditions in their respective countries. Their discussions of the methods employed in the control of brucellosis proved extremely interesting.

J. R. PORTEUS,
Resident Secretary.

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The 55th semi-annual meeting of the Veterinary Medical Association of New Jersey was held at the Berkeley-Carteret, Asbury Park, on July 13-14, 1939. During the two-day session the following program was presented:

"A Discussion of the International Classification of the Streptococci of Bovine Mastitis," by R. B. Little, Princeton, N. J.

"Biology of the Testicle and Some Conditions Traceable to Its Dysfunction," by Joseph DeVita, New Haven, Conn.

"Some Elementary Pointers on Canary Practice," by I. E. Altman, Brooklyn, N. Y.

"Septicemias in New-Born Foals," by John D. Gadd, Towson, Md.

"Use of the Ophthalmoscope," by W. G. Love, Philadelphia, Pa.

"The Function of Chemicals in the Transmission of Nerve Impulses," by D. F. Green, Rahway, N. J.

"Colic in the Horse," by J. B. Skelton, Greenwich, Conn.

"Artificial Insemination in Fowls," by R. O. Bilts, Philadelphia, Pa.

On the evening of July 14, an informal dinner was attended by about 70 members, their wives and guests.

Six applicants were elected to membership in the Association and seven new applications were received.

The meeting was under the able guidance and arrangement of the following local committee: J. A. S. Millar, chairman, Deal; H. C. Millar, Asbury Park; G. Thatcher Parker, Red Bank; P. F. Runyon, Freehold; Harry Ticehurst, Shrewsbury; Robert Ticehurst, Shrewsbury; and V. B. Height, Asbury Park.

J. G. HARDENBERGH,
Secretary.

New York

A contribution to the veterinary exhibit at the New York World's Fair has been received from the dog food division of the Institute of American Meat Packers for inclusion under the title "Friends of Pet Animals." This is a timely gift, since new and unlooked for bills are constantly being received. One is from New York City as a "city occupancy tax," another is from the State of New York for an "employées tax," and still others are for the state compensation tax, personal and property liability insurance, and coentertainment of the Third International Congress for Microbiology.

Pennsylvania

An estimated 3,500 public health workers will attend the 68th annual meeting of the American Public Health Association and meetings of related organizations in Pittsburgh, October 15-20. Every state in the Union, Dominion of Canada, Cuba, Mexico and many European countries will send their health leaders to participate in a scientific program embracing the official public health activities of North America.

An extensive exhibit, featuring commercial and scientific displays, will be an important feature of the meeting. Headquarters will be the William Penn Hotel.

The preliminary program has been reprinted from the August issue of the *American Journal of Public Health* and may be obtained from the American Public Health Association, 50 W. 50th St., New York, N. Y.

Tennessee

According to A. C. Topmiller, state veterinarian, there were 74 outbreaks of hog cholera in

23 counties of the state during the month of August, Shelby county, with 15 outbreaks, being the most seriously affected. Twenty outbreaks of erysipelas were reported from 13 counties; four of hemorrhagic septicemia; and two of blackleg.

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Among the interesting exhibits at the Memphis meeting was the display of the Associated Serum Producers, showing highlights of the educational campaign to livestock owners which the producers are carrying on in the interests of the veterinary profession.

Hundreds of newspaper clippings, typical of the more than 15,000 which have been printed by newspapers from the press releases of the American Foundation for Animal Health, were shown in one section of the display. In another division, the exhibit showed farm-paper articles on livestock health, and farm-paper warnings regarding livestock diseases, which have been published in coöperation with the Associated Serum Producers. Still another section presented the radio activities of the producers and their foundation for animal health, including educational talks, livestock health warnings, and spot announcements over leading stations throughout the year.

Washington

Failing to streamline a practice act, adopted in 1907, in a recent legislature, the Washington Veterinary Medical Association has a standing committee waiting "with its foot in the door" for the next legislature to convene in order to offer a new practice act. H. W. Marsden of Seattle is chairman of the committee.

Wisconsin

On August 31, a 90-day rabies quarantine was imposed on parts of Racine and Kenosha counties by the state department of agriculture and markets. The quarantined areas are in Mount Pleasant, in Racine county, and Somers, in Kenosha county. All dogs in the areas must be confined or kept on leash.

Wyoming

An innovation in the cattleman's war against rustlers is the camera. It is used to photograph brands as foolproof identification.

Brand inspectors of the Wyoming Stock Growers' Association already are equipped with cameras. Russell R. Thorp, executive secretary of the Association, pointed out that the photographs are of great value in court. Where the inspectors have suspected that cattle offered for sale at the market have been stolen from Wyoming rangemen and their brands altered, photographs taken of the cattle have helped to prove the inspectors' contention.

COMING MEETINGS

- New England Veterinary Medical Association. Hotel Bond, Hartford, Conn. October 2-3, 1939. H. W. Jakeman, secretary, 44 Bromfield St., Boston, Mass.
- Small Animal Hospital Association. Los Angeles, Calif. October 3, 1939. R. W. Gerry, secretary, 8474 Melrose Ave., Los Angeles, Calif.
- Southwestern Iowa Veterinary Medical Association. Hotel Chieftain, Council Bluffs, Iowa. October 3, 1939. George B. Senior, secretary, P. O. Box 35, Creston, Iowa.
- Veterinary Medical Association of New York City. Hotel New Yorker, New York, N. Y. October 4, 1939.
- Dallas-Fort Worth Veterinary Medical Society. Dallas, Texas. October 5, 1939. H. V. Cardona, secretary, 2736 Purington Ave., Fort Worth, Texas.
- Houston Veterinary Association. Houston Texas. October 5, 1939. W. T. Hufnall, secretary, 1612-14 E. Alabama Ave., Houston, Texas.
- Southwestern Minnesota Veterinary Medical Association. Legion Hall, Westbrook, Minn. October 5, 1939. L. E. Stanton, secretary, Jackson, Minn.
- University of Illinois Veterinary Conference. University of Illinois, Urbana, Ill. October 5-6, 1939. Robert Graham, secretary, University of Illinois, Urbana, Ill.
- Washington State Veterinary Medical Association. Chamber of Commerce auditorium, Yakima, Wash. October 7, 1939. V. C. Pahlman, secretary, 1524 Fifth St., Chehalis, Wash.
- West Virginia Veterinary Medical Association. Kanawha Hotel, Charleston, W. Va. October 9-10, 1939. J. H. Rietz, secretary-treasurer, Oglebay Hall, West Virginia University, Morgantown, W. Va.
- Chicago Veterinary Medical Association. Hotel Sherman, Chicago, Ill. October 10, 1939. W. A. Young, secretary, 157 W. Grand Ave., Chicago, Ill.
- Southeastern Michigan Veterinary Medical Association. Medical Arts Bldg., 3919 John R St., Detroit, Mich. October 11, 1939. F. D. Egan, secretary, 17422 Woodward Ave., Detroit.
- St. Louis District Veterinary Medical Association. Melbourne Hotel, St. Louis, Mo. October 11, 1939. J. P. Torrey, secretary, 610 Veronica Ave., East St. Louis, Ill.
- Maine Veterinary Medical Association. Orono, Me. October 12, 1939. A. E. Coombs, secretary, 1 Kennebec St., Skowhegan, Me.
- Kansas City Veterinary Medical Association. Kansas City, Mo. October 16, 1939. S. J. Schilling, secretary, Box 167, Kansas City, Mo.
- San Diego County Veterinary Medical Association. Zoological Research Bldg., Balboa Park, San Diego, Calif. October 16, 1939. Paul D. DeLay, secretary, State Poultry Pathological Laboratory, Balboa Park, San Diego, Calif.
- American Public Health Association. William Penn Hotel, Pittsburgh, Pa. October 17-20, 1939. Reginald M. Atwater, executive secretary.
- District of Columbia Veterinary Medical Association. Mayflower Hotel, Washington, D. C. October 17, 1939. W. M. Mohler, secretary, 5508 Nebraska Ave. N. W., Washington, D. C.
- Eastern Iowa Veterinary Association. Hotel Montrose, Cedar Rapids, Iowa. October 17-18, 1939. H. E. Tyner, secretary, New London, Iowa.
- Purdue University Veterinary Short Course. Veterinary Bldg., Purdue University, Lafayette, Ind. October 17-20, 1939. R. A. Craig, chief veterinarian, Purdue University, Lafayette, Ind.
- Southern California Veterinary Medical Association. Chamber of Commerce Bldg., Los Angeles, Calif. October 18, 1939. Charles Eastman, secretary, 725 S. Vancouver Ave., Los Angeles, Calif.
- Long Island Veterinary Medical Association. Canoe Place Inn, Hampton Bays, L. I., N. Y. October 19, 1939. Herman Tax, secretary, State Institute, Farmingdale, L. I., N. Y.
- Pennsylvania State Veterinary Medical Association. Harrisburg, Pa. October 19-20, 1939. James F. Shigley, corr. secretary, State College, Pa.
- Massachusetts Veterinary Association. Hotel Westminster, Copley Square, Boston, Mass. October 25, 1939. H. W. Jakeman, secretary, 44 Bromfield St., Boston, Mass.
- Florida State Veterinary Medical Association. Tampa Terrace Hotel, Tampa, Fla. October 30-31, 1939. J. V. Knapp, secretary, The Capitol, Tallahassee, Fla.
- Midwest Small Animal Association. Hotel Burlington, Burlington, Iowa. November 2, 1939. C. L. McGinnis, secretary, 3000 N. University, Peoria, Ill.
- Southern Veterinary Medical Association. Columbia, S. C. November 9-11, 1939. L. A. Mosher, secretary, Box 1533, Atlanta, Ga.
- Mississippi Valley Veterinary Medical Association. Hotel Custer, Galesburg, Ill. November 15-16, 1939. L. A. Gray, secretary, Bushnell, Ill.
- United States Live Stock Sanitary Association. Morrison Hotel, Chicago, Ill. December 6-8, 1939. L. A. Merillat, secretary, 221 N. La Salle St., Chicago, Ill.

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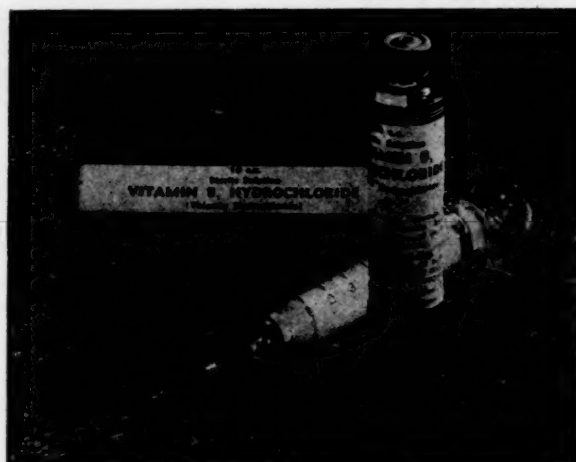
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